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PSYCHIATRIC EXPERIENCE IN THE WAR, 1941-1946 *

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At this meeting of the Association, the first since the conclusion of World War II, there would seem to be an obligation to present to the membership a statement of our psychiatric experience in the Army. Of necessity it must be greatly condensed, and it is given with a deep sense of appreciation of the 2400 physicians [1] who served in neuropsychiatry in the Army in the course of the war. There were 992 members of the American Psychiatric Association in the Army, including many who affiliated with the Association after they became military officers. Because of my relationship with this large group of men, I feel it a duty to tell you briefly of their accomplishments, of the size of the problem with which they dealt, of the most apparent lessons that we learned from the experience and, of some recommendations based on it.

Whatever we accomplished in the Army, (neurology and psychiatry were under one chief) was due to the unfailing support of Major General Norman T. Kirk, the Surgeon General of the Army, and his immediate assistants, Major General George Lull and Brigadier General Raymond Bliss. It was they, for example, who made it possible for psychiatry to be given a status in The Surgeon General's Office on an equal parity and rank with those of medicine and surgery. Many of the handicaps and obstacles which had to be overcome were the result of the lack of planning during peacetime and early in hostilities, along with the ignorance and prejudices of many people. Sometimes it seemed that we were trying to hew a foothold in solid granite and only by the dint of the tremendous effort of many people could we increase that hold by a fraction of an inch.

The Assignment of Personnel.—The places in which psychiatrists served were numerous. They functioned as members of the staff in practically all army medical organizations as well as in some other positions in which they served alone. They were placed in all of the 108 induction centers; served in all of the 65 general and 57 regional and most of the 306 [2] station hospitals in this country; in the 217 general, 196 station, and 91 evacuation hospitals overseas. There were 10 specialized hospitals devoted entirely to neuropsychiatry, 8 overseas and 2 in this country, 5 of which were primarily for neurotic patients and 3 for psychotic. Psychiatrists were placed in the outpatient units, called the mental hygiene consultation service, in 36 basic training camps where they aided recruits in their adjustment to army life and advised the command on matters relative to morale and mental health. Psychiatrists were assigned to all large transports and hospital ships which carried psychiatric patients. They were stationed in disciplinary barracks and in the centers for the rehabilitation of military prisoners. The 23 [3] convalescent hospitals were developed largely to meet the need for more adequate treatment facilities for neurotic patients who composed from thirty to fifty percent of the patient load in such installations. Psychiatrists served in 91 combat divisions. They were a part of the examining team in the 8 redistribution centers and in the 27 separation centers. They served as consultants to theaters, service commands, armies and air forces.[3] There were eight of us in The Surgeon General's Office.

In addition to the psychiatrists, it was pos-

* Read at the 102nd annual meeting of The American Psychiatric Association, Chicago, Ill., May 27-30, 1946.

[1] The author wishes to express appreciation for the answers given by some 200 military psychiatrists to two questions: What did we learn in military psychiatry and how can it be implemented in civilian practice? The contents of this paper have been drawn largely from their observations and recommendations.

[2] There were 26 Army Service Force Regional Hospitals and 31 Air Force: 138 Army Service Force Station Hospitals and 168 Air Force; 13 Army Service Force Convalescent Hospitals and 10 Air Force. All 65 General Hospitals were under Army Service Force jurisdiction.

[3] Psychiatrists in the air forces were under the supervision of the air surgeon and therefore not included in detail in this report. The air force hospitals are included in these figures.

sible to directly secure or commission approximately 400 clinical psychologists who served with them in many of these installations. Military psychiatric social work became recognized and although commissions were never secured for this group, some 700 soldiers and WAC members served in this capacity. Approximately 100 additional workers trained in this field were supplied by the Red Cross. Before leaving the subject of personnel, I am proud to report that even with a very incomplete listing, 82 psychiatrists have received army citations and medals, including 38 awards of Legion of Merit and 18 of Bronze Stars.

The Magnitude of the Job

Statistics can only roughly describe the magnitude of the neuropsychiatric problem in the Army. They do not reveal the obstacles, the disappointments, the frustrations, nor the satisfactions, devotion to duty or the caliber of professional work. Unfortunately even our statistics are still incomplete, and we must seriously question the accurateness of what we have. There were too many nonmedical factors influencing the use of different types of diagnoses. The latest figures available are essentially the same as those which were published in the preliminary report of Lt. Col. Appel [4] last January.

During the period of January 1, 1942, through December 30, 1945, approximately 1,875,000 men were rejected for military service because of neuropsychiatric disorders. This represented 12% of all men examined and 37% of the men rejected for all causes. During the period of January 1, 1942, through December 30, 1945, there were approximately one million patients with neuropsychiatric disorders who were admitted to army hospitals. This represented a rate of 45 admissions per 1000 troops per year and constituted 6% of all admissions. Seven percent of the neuropsychiatric admissions were for psychoses; 64% were for psychoneuroses and the remaining 29% represented diagnoses of psychopathic personality, mental deficiency and other psychiatric or neurological disorders. Of the one million neuropsychiatric admissions, 40% were among troops overseas and 60% among troops on duty in the U. S. The peak load of neuropsychiatric patients occurred in April 1945 with approximately 50,000 in army hospitals. From January, 1942, through December, 1945, there were 380,000 men who were granted medical discharges from the Army because of neuropsychiatric disorders, which represented 39% of all medical discharges. In addition 137,000 men were discharged administratively for personality disorders which included mental deficiency, psychopathic personality, enuresis and other conditions which according to army procedure, are not given medical discharges. This makes a total of over 500,000 men discharged for personality disturbances.

The evacuation figures also are significant during the 4 year period of 1942-1945. Nearly 19% of the number of army patients evacuated from overseas were neuropsychiatric. This figure broken down shows that 31% of the patients who were returned in 1942 for medical reasons were psychiatric and following the great increase of battle wounded, this fell to 15% in 1945.

What We Did

In the space of time allotted, it is impossible to give more than barest headlines of the numerous jobs tackled by neuropsychiatry in the army during the war. Neuropsychiatry, included psychiatry, neurology, clinical psychology, psychiatric social work and psychiatric nursing. In addition, much help was received from the Red Cross, chaplains, occupational therapists, and the special instructors in convalescent hospitals.

With the help of civilian psychiatrists and Navy psychiatrists, we participated in the examination of approximately 15,000,000 men at the induction center level. In the 36 mental hygiene consultation services, we provided individual psychiatric help to between 3 and 5% of all trainees in basic training. Three hours of mental hygiene lectures were given to all trainees and six hours to all officers. A 3-month training course in neuropsychiatry was provided for 1300 medical officers; 300 clinical psychologists were given a month course; approxi-

[4] Appel, J. W., Incidence of Neuropsychiatric Disorders in the U. S. Army in World War II, Am. J. Psychiatry, 102: 433-436, Jan. 1946.

mately 800 nurses were given a three months course in psychiatric nursing.

An early policy of diagnosing and disposing of neuropsychiatric patients in hospitals was changed to authorize maximum hospital benefit for all types of such cases except chronic psychotic reactions and degenerative neurological disorders. Patients were concentrated in 28 specially designated general hospitals for the better treatment of psychotic and severe neurotic reactions and neurological centers were established in 18 general hospitals. An elaborate treatment plan was developed in convalescent hospitals for neurotic patients who were returned from overseas, which included an instructor staff of from 75 to 100 persons for more than this number of arts, crafts, business and mechanical courses. These hospitals, despite the fact that they received only those soldiers not salvageable from treatment in overseas hospitals, returned from 15 to 25% to duty within the Army and sent the great majority of the remainder home much improved. In 1942, approximately 80% of the psychotic patients were transferred to Veterans' or State Hospitals for further care; in 1945, after the treatment program was well in effect, approximately 75% were sufficiently recovered to return directly to their homes. In addition to the extensive development of the activity program for psychiatric patients, group psychotherapy technique was improved and was widely used. Psychotherapy under sedation was highly developed throughout the Army and hypnosis was extensively used in certain areas.

Remarkable results were obtained through the development of a plan of treatment of combat casualties. From an initial start of no plan except for removal to the rear area hospitals with a 5 to 10% salvage, treatment centers were set up near the front line, utilizing division psychiatrists and others "stolen" from evacuation hospitals. With prompt treatment, 60% of casualties were returned within 2 to 5 days to duty for combat or service in the forward area. The hospitals further back salvaged an additional 30% for non-combat duty in the theater.

Preventive efforts, including the work of the division and mental hygiene consultation service psychiatrists, were an outstanding achievement. No statistics are available, but their education of line and medical officers and their advice to command on mental health and morale undoubtedly accounted for a tremendous saving of manpower. In addition, at least a dent was made in our struggle to obtain a definite tour of combat duty for the infantry soldier; rest camps were established by a few divisions; policy which initially had sent individual soldiers as replacements into combat units was changed to sending in an acclimatized group.

At a policy level, during 1944 and 1945, some 16 Army Service Force circulars were issued dealing specifically with directions regarding neuropsychiatry; 16 war department circulars having army-wide authority dealt with neuropsychiatry; and 20 technical medical bulletins concerned entirely or chiefly with neuropsychiatry were distributed throughout the Army. Many of these were entirely educational and have been widely reprinted for civilian use.

One should mention also that the neuropsychiatric service included the evacuation of 120,000 psychiatric patients, 28,000 of them by air; the participation in the examination and rehabilitation efforts of 45,000 military offenders; the examination of repatriated American prisoners of war; the many thousands of consultations on general medical and surgical patients in hospitals; and the many spectacular achievements of the psychiatrists in the Army Air Forces which have not been included in this report because this group was not under the immediate direction of the Surgeon General.

WHAT WE LEARNED

It is difficult to place priorities of importance on the many lessons that we learned from the psychiatric experience in the remarkable human laboratory created in the Army by this war. It provided a controlled situation in which all men were regimented and lived under the same conditions, and presumably all were motivated towards a common goal.

Perhaps the most wide spread and impressive experience of the military psychiatrist was the opportunity to observe the effect of extraordinary external stress in precipitating

personality disorder. The existence of psychiatric determinants such as history of maladjustment in the family or in the individual, contributed to many of the casualties that occurred. On the other hand, far more impressive in the adjustment process than the history or the personality make-up or the internal psychodynamic stresses, was the force of factors in the environment which supported or disrupted the individual. We learned that maintenance of mental health was largely a function of leadership which included the extremely important element of motivating the man to want to do his job and remain loyal to his associates and his unit. The absence or weakness of these supportive factors in the presence of many excessive stresses seems to account for many of the psychiatric casualties, a large number of which undoubtedly occurred in individuals with a minimal predisposition to mental illness.

There are few, if any, life situations in civilian existence which are comparable in their demands to the amount of readjustment that is required regularly in the Army at war. The rude and abrupt separation from close personal ties to people and places by induction which is followed by regimentation, discipline, lack of freedom and the physical stress of training is sufficient to produce personality disorders in many individuals. For those who survive this adjustment, there awaits the demands of going to the far corners of the world, of living in extremes of climate, of doing battle with monotony, of having few or no recreational facilities, of experiencing repeated bombing attacks and of having few of the comforts and none of the luxuries of previous everyday life. Finally there is the supreme test of surviving the ordeal of combat which certainly has no counterpart in civilian life.

Psychiatrists in the service were called upon to endure in varying degrees these stresses and to prevent and treat illness which was caused by them. They were aware of the importance of the role of internal stresses in the production of mental illness. Yet, perhaps because of the necessity of working against time in treatment and the obviousness of external pressure on every individual, the internal psychodynamics seemed relatively unimportant. Their day by day experience impressed upon them evidence to indicate that under certain circumstances the personality make-up seemed much less of a factor in the incidence of mental breakdowns than the degree and type of environmental stress in relation to the support against it. The results seen were a complementary series, a combination of internal and external pressures.

All of us were surprised to discover that only 7% of hospitalized psychiatric patients were psychotic. This 7% shrinks even further when we take into account the fact that for every psychiatric patient admitted to the hospital, there were at least 3 and probably more who were seen by psychiatrists and given professional help in out-patient clinics, battalion aid stations, and consultation services and never referred to a hospital. The vast majority of the psychiatric cases seen in the Army were mild maladjustments and neurotic reactions. By contrast, the major portion of civilian psychiatric practice deals with psychoses. This contrast of the type of patient load between military and civilian psychiatry leads one to the obvious conclusion that the practice of psychiatry in civilian life falls far short of its potential contribution to the need.

Another lesson was derived from the revelation of the very great shortage of trained personnel, not only of psychiatrists and neurologists but of psychologists and psychiatric social workers. Of the 2400 medical officers who were assigned in neuropsychiatry, approximately 800 had had psychiatric experience prior to the war and the majority of these had had experience only in state hospitals. The remaining 1600 men, had to be trained in the Army, nearly 1300 of whom were given a three months' course before assignment. Much to our surprise, we found that even this relatively short intensive course enabled this group to do a splendid job. We had to provide training for clinical psychologists; we had to train enlisted personnel in abc's of psychiatric social work. Not until the war was almost over did we have anywhere near enough personnel to do the job. We offer no apologies for our personnel though we are frank in the admission that some of them were inadequate personally or professionally including many of

those who had had prewar experience in psychiatry. Our lesson was that even brief intensive training for a select group, gave them sufficient knowledge to do creditable psychiatry under supervision. Had we not had this help, we would have failed.

Another observation which can be made as a result of our experience, is that if intensive treatment was provided early, in an environment in which the expectation of recovery prevailed, remarkable results were obtained. Even with streamlined treatment in a system that provided outlets in activity along with personal and group psychotherapy, a phenomenal recovery rate occurred. This was true in combat treatment areas where 60% were returned to duty within a few days and an additional 30% within a few weeks. In our hospitals in this country which received only the most resistant cases from overseas, it was possible to return an additional 15-25% of combat casualties to some kind of duty and to send the great majority of the others home very much improved. Of considerable surprise to many was the unexpectedly high recovery rate for psychotic patients who so often become custodial patients in civilian hospitals. Partly because of early recognition by medical officers and partly because of intensified treatment which was provided, 7 of each 10 psychotic hospital admissions in 1945 were able to be discharged home. Of 1,000,000 neuropsychiatric hospital admissions which, allowing for multiple admissions, represents perhaps 850,000 persons, there were only 380,000 men medically discharged and 130,000 administratively discharged. Many of these were hospitalized prior to the time (1944) when treatment was officially approved for psychiatric patients in the Army and when the policy was to discharge anyone with any psychiatric disorder. There is strong suggestive evidence to believe that if we could educate the public, if we could adequately staff our clinics and our hospitals and if above all we could emphasize and practice intensive early treatment, we could materially increase the present rate of recovery of mental illness.

Those of us in administrative and policy forming jobs were disturbed about the inadequacy of a preventive program in psychiatry. We had difficulty in convincing people that administrative policy and practice influenced the loss of manpower from psychiatric illness and that this loss of manpower could be prevented if the psychiatric aspects were considered in the formulation of personnel policies. It is perhaps of significance to indicate that there was only one individual in the entire War Department who devoted his full time to the consideration of measures for the preservation of mental health. Good leadership involved the inspiration of an emotional attachment of a soldier to his superior and the wise exploitation of this relationship in order to accomplish the mission of a group. We seemed to learn anew the importance of the group ties in the maintenance of mental health. We were impressed by the fact that an individual who had a strong conviction about his job, even though his was definitely unstable personality, might make a remarkable achievement against the greatest of stress. We saw again and again the relationship between how people feel and believe and think and their effectiveness; we watched the effect on the men of major personnel policies in regard to rotation, rest, recreation and incentives.

Among other lessons we learned that psychiatrists are widely divergent in their concepts of different types of mental illnesses. This was most vividly brought home in our problems concerning nomenclature. We found that the standard nomenclature which devotes 66 titles to the various psychotic reactions and 22 to all other types of reactions was totally inadequate for our use in the Army where only 7% of hospital neuropsychiatric admissions were for psychoses and the balance represented an infinite variety of personality disorders. Not only was it inadequate but when we came to make the effort to revise it we found the widest difference of opinion as to what various clinical diagnoses meant to different people. We had special difficulties with the terms psychoneurosis, simple adult maladjustment, constitutional psychopathic state. We found that these had to be clarified, and with the help of a considerable number of the members of this Association who were both in and out of the Army, we revised the official army psy-

chiatric nomenclature.[5] We regard this revision as one more evolutionary step toward further crystallization and unification of our concepts of the different reaction types of mental illness.

Again in this war we had the opportunity to work shoulder to shoulder with our confreres in internal medicine and in surgery. We feel that this was of tremendous advantage to psychiatry. Not only did it bring psychiatry closer to these groups but where we had a capable, intelligent practical psychiatrist, he was a missionary for all of us. We feel it was one of the richest benefits of the war which should continue in peace and civilian life. It is extremely disconcerting to find that Colonel Thomas Salmon[6] pointed out this as one of his major impressions in World War I that

> Of all the factors that have served to bring about the change (referring to the previous isolation of psychiatry from the rest of the medicine), none can compare with the effect of working side by side in every medical activity of the war with doctors of all specialties. The future of psychiatry in civilian life then, as far as can be predicted from personal indication, will bring an increased community of interests between psychiatrists and other physicians in clinical work, medical teaching, medical research and the promises of an inspiring advance into the wide field of social medicine.

We with recent military experience renew our hopes, on the basis of the impetus from this war, in these words of Tom Salmon, which have fallen short of his prediction.

We were able to develop an extensive program which utilized clinical psychologists and psychiatric social workers. There were many problems in the process, not only in helping the Army to recognize the need for these auxiliary workers but also in educating psychiatrists who had never worked on a team with members of these groups. In many instances the psychologists, psychiatric social workers too, had never had any experience on a clinical team. There were the petty jealousies that for the most part were easily overcome. The final result was the development of a congenial and efficient relationship which was profitable for all three fields, and which gave those of us most vitally concerned in its development a sense of great pride.

We were aroused to the great need for a "social" psychiatry—the application of its principles to many activities which are not concerned with the diagnosis and treatment of illness. Our experience closely paralleled and in many instances was identical with the observations and conclusions of Rees,[7] Hargreaves and other spokesmen for British military psychiatry. We saw the need for the use of psychiatric principles in selection. Although we never uniformly accomplished it in the American Army we felt psychiatric study should be a cornerstone in the selection of officers as it became in the British Army. We were made aware of its potential contribution to the solution of assignment both in and out of the Army, to the choice of personnel in professions and industry. We saw the result of misassignment which in so many instances was directly contributory to the development of a psychiatric casualty. We had an extensive experience in its social application to misconduct as seen in military offenders and the definite contribution towards understanding and rehabilitation it could make in this field.

We must admit many failures. Many of our difficulties arose from the lack of planning. There was no psychiatric screening of the national guard and other units, including the medical officers, that came into the Army by any means other than through the induction center and not even gross misfits in these groups were eliminated. On the other hand, we expected far too much from the induction center screening and fell in with the overselling of what psychiatry could do at that level, even to the point that some people assumed there would be no psychiatric casualties because we had screened them out. We never were successful in applying psychiatric principles to the selection of officers. The Army policy did not retain psychiatric pa-

[5] This effort was discouraged by the Chairman of the Committee on Nomenclature of the APA, and the Journal did not print it. It appeared as War Dept. Technical Medical Bulletin, 203, 19 Oct. 1945 and has or will be reprinted in J. Nerv. & Ment. Dis., J. Mental Science, Mental Hygiene, and J. Clin. Psychology.

[6] Salmon, T. W.: The Future of Psychiatry in The Army. Mil. Surg. 47: 200-207, 1920.

[7] Rees, J. R., Shaping of Psychiatry by War. New York, W. W. Norton & Co. 1945.

tients for treatment until we changed the policy two years after the war began; we knew most neurotic patients were not helped by hospitalization, but it was nearly three years after war began that we were able to get them into convalescent facilities. We, as psychiatrists, have talked about morale and prevention but to the surprise of many of us, few had thought in concrete terms of which methods were applicable to the Army. We often failed in orienting our own medical officers, including psychiatrists, to the specific needs of the military, in which one must accept the group aim and needs as of paramount importance instead of that of the individual. We felt acutely our lack of previous recruiting of capable men into the field of psychiatry which was so clearly called to the attention of this association by Alan Gregg [8] two years ago. We were aware again and again of the few undiplomatic or eccentric individual psychiatrists who unfortunately did much to slow the acceptance of our specialty. None of us in the military feel that we more than scratched the surface of many possibilities and we were never in a position to do much more than attempt to meet the more pressing demands for our services. The most severe indictment that can be made must be laid at the feet of the psychiatric profession as a whole,—we permitted the military to forget almost all the lessons that we learned in the last war. As a consequence, we began this war with hospital treatment forbidden, with no plan of treatment for combat troops, no unit to provide such, no plans for training, no psychiatrist in combat divisions, and not even a psychiatrist in headquarters when war was declared.

Recommendations

If psychiatry or the Army or civilians are to profit from the lessons learned it would seem essential that we make specific recommendations. These in themselves are meaningless unless they can be implemented. They can only be implemented if first, they seem as important to all of American psychiatry as they did to us in the Military and secondly, if American psychiatry can and will provide those activators that every fighting soldier required—aggressive, competent leadership, a conviction of the importance of the job, and the solidarity of the entire organization towards the accomplishment of the aim. To some of us, psychiatry seems to be at a crossroads: we may continue to permit our chief emphasis of interest to be in the psychoses or in seeing 6 or 8 analytic patients a day in our ivory towers. We can go on talking our jargon and accepting the trickle of all comers for our ranks. On the other hand, we can turn up the road which leads us into the broad field of social interests; we can devote our efforts to the potential opportunities of helping the average man on the street. We can reorganize our front on the basis that we have just experienced an international psychosis and we are living in a world filled with its residual of grief and sorrow and suffering that have nothing to do with "dementia praecox" or the "oedipus conflict," but with individual struggles, community needs, state and national problems and international concerns.

In making recommendations, there is the earnest hope that they may receive acceptance and implementation by this group. We learned from bitter experience that certain ideas in psychiatry could be over-sold to the public and until we can develop plans and get them underway, we of necessity must be cautious in our promises to those whom we hope to serve.

1. Psychiatry needs a much more forceful and better organized front, with a planned course of action. It needs a spirit of unity, of unselfishness, of oneness of purpose that so many of us felt in the Army. If it is going to obtain the best for its patients, present and future, if it is going to expand its field of interest to include current social problems it must overcome its passivity and the inarticulateness referred to by Alan Gregg two years ago, in his critique of this organization. We need some long-time plans as to the aims of psychiatry in research, medical education, treatment, prevention; we need to devise methods and the machinery by which we best may attack the immense problems revealed to us anew in the course of our experience in the war—leadership, selection, group relations, motivation.

[8] Gregg, Alan. A Critique of Psychiatry. Am. J. of Psychiat. 101: 285-291, Nov. 1944.

2. We are desperately in need of an organized intensive plan of recruiting and selection of men for our field. At the moment our needs for training are even more pressing. The handwriting was on the wall within a few months after the war began that we were going to have, even then did have, an acute shortage of trained personnel. It was apparent then that we needed to enlist far more help than we could obtain from tugging at our own bootstraps to provide training opportunities for the postwar situation. At the present moment we are confronted with the dilemma of having far more first class applicants, than we can possibly provide training for. We have neither the facilities nor, more important, the trainers. It would seem difficult for any individual with teaching ability in psychiatry to justify omission from his schedule of considerable effort devoted to this acute need. On the other hand, if such an effort is to be most effective it cannot be left to individuals; it should be the responsibility of organized psychiatry to develop opportunities and standards and facilities and teacher trainers to meet this need. Such plans should certainly be coordinated with training for clinical psychology and psychiatric social work.

3. Our experience in the Army paints in bold relief our need for clarifying concepts of clinical psychiatric entities. Our nomenclature was inadequate and what terms we used were interpreted by different psychiatrists to mean very different entities. Perhaps we do not know enough, but no scientific progress is more needed, not only that we may be better understood but also for the advantage of more uniform teaching of those to follow. Our research efforts are insignificant in comparison to the needs.

4. On the basis of our experience with general medical officers, an intensive effort must be taken to revamp medical education so that psychiatry may become a basic subject and the student learn as much about the anatomy and physiology and pathology of the psyche as he does of the soma. This will require a number of changes in psychiatry: we must clarify our concepts; we must overcome our isolation from medicine and surgery; we must develop a system and a role in medical school that encourages the better students to become identified with us; we cannot succeed if the student gains the impression that psychoses are the chief interest of psychiatry. Furthermore there needs to be a studied campaign as to how to present most effectively our facts and figures; to whom they should be presented—professors of medicine, deans, presidents, the public.

What plans and recommendations should be presented? At the moment, in the competition for hours of instruction in medical schools psychiatry is fortunate to get 4% of the total hours in the curriculum despite the fact, or in face of the fact, that 50% of the patients that all doctors see present primarily emotional disorders. Surely this is one of the bigger challenges facing organized psychiatry.

5. A most important step in overcoming our isolation is through the development of a closer working relationship with the general fields of medicine. We are handicapped by the necessity of having specialized hospitals which tend to keep us out of circulation with general medical groups. On the other hand, psychiatry needs the support of and an intimate contact with this other group which paid us such rich dividends in the Army. We need them but they also need us; even though we could train two or even five times as many psychiatrists, the majority of minor psychiatry will be practiced by the general physician and the specialists in other fields. From our army experience we know that many of these physicians are ill-equipped to diagnose and treat minor emotional disorders. We know that psychiatry has much to offer them. If we are to take this obligation seriously, it means definite planning towards our participation in general hospitals, in outpatient clinics, in affiliations with medical and surgical groups, in general medical meetings. It means the interchange of fellowships with the internists and the pediatricians. It means reciprocal arrangements between the American boards of these specialties. It means the extensive development of short courses in psychiatry similar to the annual refresher courses arranged by the American College of Physicians.

6. No field of human activity is in greater need of an educational program for the

public. Conservatively there are at least two million people who have had direct contact or relationship with psychiatry as a result of mental sickness or personality disorders that occurred in soldiers in this war. For a large percentage of this group it is their first. They are becoming educated, not because we in psychiatry have any organized plan, but because there is a public demand for it which the press and radio and screen are trying to satisfy. We see the results of this hit and miss plan in such unfortunate moving pictures as "Shock" or "Spellbound." We are aware of the way the subject is batted around in newspaper and magazine articles. We felt the acute need of public education as a means of helping our veterans readjust and be accepted. It would seem that this widespread interest and desire for information is another evidence that psychiatry is at a crossroads. It can plan an organized program or it can sit by and miss a golden opportunity.

7. Organized psychiatry needs to develop an articulate authority who can represent our best thoughts and best recommendations, who can press for the issues that are so important to our patients. Who speaks for the state hospital superintendent who is harassed by politics and squeezed because of the lack of understanding of members of the board and his legislature? Why should not organized psychiatry fight for him that he might have an opportunity to provide the best of psychiatric care? Who will speak for psychiatry and support our representatives in the military, in public health, in the veterans? What explanation can we give to the fact that the military ignored the psychiatric lessons of the last war? Did we make a maximum effort to support Dr. Parran and our own Fellow Robert Felix in the recent federal legislation so vital to psychiatry? Unless we are so organized with the necessary personal investment of our time and our money and our effort, what chance do we have of perpetuating the gains made in this war?

8. Unlimited opportunities are the social issues that confront us and surround us. What plans do we have for a contribution of our knowledge to the human activities of academic education of public health, or recreation? What efforts have we made to give the benefit of our experience to national education organizations, to national recreational organizations, co-workers in public health? Are we aware of the fact that only in three states is there a psychiatrist directly connected with a state public health organization? It would seem that psychiatry might contribute to the common weal through the development of selection methods of public school teachers, and could this be adopted, it might avail more benefit than all our treatment efforts put together. It has made a contact, a beginning in industry with much in prospect; it has scraped the surface in penal work and criminology. May I ask when are we going to force the issue of neutral court psychiatrists so that in all legal cases we can appear as public servants and not paid partisans? In the Army we were constantly confronted with the mental health aspects of training, selection, assignment, morale, leadership, manpower needs—all of which have their analogues in civilian life.

9. Of all the potential expansions for psychiatric effort, the field of prevention promises unlimited opportunity. We have every reason to believe that had the manpower and the effort and the time been devoted to the preventive aspects of psychiatry as was given to the preventive efforts in physical medicine, we too could have perhaps demonstrated spectacular achievements comparable to vaccination or DDT. We had to face the fact that psychiatry had done little in the field of prevention, despite the valiant efforts of the National Committee of Mental Hygiene. We in America have carefully evaluated our physical assets or material but as yet we have only begun to develop methods of obtaining most efficiency from our manpower, of further developing and maintaining this manpower. On the basis of our experience in the Army, it is not too much to promise that psychiatry could contribute greatly in a preventive program to increase the effectiveness and utilization and value of this most important of all commodities—human life.

Conclusion

Psychiatry in the Army did a reasonably creditable job primarily because of the devo-

tion and integrity and ability of a small group of men. It failed in a good many ways and some of these failures were because we in psychiatry failed to select and train new and better men; because we were too inarticulate. Psychiatry has had opened to it great and broad vistas of opportunity and need, many of which were apparent following World War I. But it is saddening to see how few were followed and reached these needs. Perhaps psychiatry still is not ready to rise to the occasion to meet these needs. Perhaps its body of knowledge is not sufficiently great to tackle them. Our best hope lies in the cohesion of our forces, a plan of strategy, a conviction as to the importance of the job, and a self-sacrificing aggressive, militant leadership.

PSYCHIATRIC LESSONS FROM WORLD WAR II [1]

CAPTAIN FRANCIS J. BRACELAND (M.C.), U.S.N.R.

When the final history of World War II is written and like all history is entombed in large volumes, to the student who reads it carefully it will reveal the same lessons which are learned so painfully and at such great cost in all wars.

Each successive war necessarily brings with it new problems, but the old ones crop up repeatedly and as we encounter them again and again we wonder why man is so slow to profit by experience and history. Perhaps the cynic expressed it best of all when he said, "Men learn from history only that men learn nothing from history."

Simple as it may seem, one of the most important basic principles to remember is that wars are fought by people. They were in the days of triremes, they are today and they will continue to be even in an atomic age unless the nations of the world decide to settle their problems in a peaceful fashion. In the last analysis then the outcome of a battle, the final result of a war, and even the peace time negotiations which follow are dependent upon what men do and how they react, and these phenomena are of paramount interest to psychiatrists. In this regard the psychiatrists follow literally the dictum of the sage that "the proper study of mankind is man."

It has been said that "experience is the best teacher." Certainly it is the best teacher of the reactions of men subjected to stress. If it can also be said to be the best teacher of psychiatry, then present day psychiatry has had experiences from which it can profit for many years to come. These papers today deal with experiences garnered the hard way and, inasmuch as the process of gaining psychiatric knowledge at the expense of world catastrophe is too high a purchase price, it is imperative that we at least expect to use the lessons which are recorded from our experiences in the recent war.

During the course of World War II this nation had more than five times as many men under arms as ever before. In the United States Navy and Marine Corps alone the personnel expanded from 403,390 on December 7, 1941 to a grand total of 3,894,180 on V-J Day. In so doing it enlarged approximately 865% to become the largest and the greatest Navy in the history of the world. In selecting, assembling, training and caring for this large body of men preparatory to, during and after combat, a great deal of psychiatric data was accumulated. Analysis of some of these data when finally accumulated will simply confirm our previous beliefs; some of these findings will accentuate the fact that there are still great lacunae in our knowledge of human nature. All of them, however, properly interpreted, will add to the sum total of our psychiatric knowledge and as such will be worthy of study.

In the U. S. Navy from January 1, 1942 to July 1, 1945, a period which roughly covers the war years, there were 149,281 patients admitted to various naval hospitals and dispensaries throughout the world for all reasons which could be subsumed under the heading of psychiatric illnesses. This comprehensive category includes everything from mild emotional instability to malignant schizophrenia. Of this number of patients 76,721 [2] individuals had to be separated from the naval service and this figure represents roughly 32.4% of the total naval medical separations during the entire war.

One more figure should be mentioned at this time. During the war years 91,565 enlisted and inducted recruits were separated from naval training centers because of neuropsychiatric difficulties. These discharges for neurologic and psychiatric reasons were also all inclusive. They included the mentally deficient, the patients with organic central

[1] Read at the 102nd annual meeting of The American Psychiatric Association, Chicago, Ill., May 27-30, 1946.

The opinions and assertions contained herein are the private ones of the author and are not to be construed as official or reflecting the views of the Navy Department or the Naval Service as a whole.

[2] Necessarily these figures will have to be readjusted from time to time as new computations are made. Also, the 1945 figures are an estimate.

tion and integrity and ability of a small group of men. It failed in a good many ways and some of these failures were because we in psychiatry failed to select and train new and better men; because we were too inarticulate. Psychiatry has had opened to it great and broad vistas of opportunity and need, many of which were apparent following World War I. But it is saddening to see how few were followed and reached these needs. Perhaps psychiatry still is not ready to rise to the occasion to meet these needs. Perhaps its body of knowledge is not sufficiently great to tackle them. Our best hope lies in the cohesion of our forces, a plan of strategy, a conviction as to the importance of the job, and a self-sacrificing aggressive, militant leadership.

PSYCHIATRIC LESSONS FROM WORLD WAR II [1]

CAPTAIN FRANCIS J. BRACELAND (M.C.), U.S.N.R.

When the final history of World War II is written and like all history is entombed in large volumes, to the student who reads it carefully it will reveal the same lessons which are learned so painfully and at such great cost in all wars.

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nervous system diseases and epilepsy, as well as those with behavior disorders and all other forms of psychiatric illnesses.

The prodigious task of selecting, diagnosing, caring for, treating and, whenever necessary, separating these individuals from the service was carried out, in the main, by 693 naval medical officers with varying degrees of psychiatric training. At the time of the outbreak of the war there were approximately only 25 medical officers assigned to neurologic and psychiatric duties in the Navy. The remainder of the above mentioned number was secured by recruitment and training, well over one half by the latter method.

It is of course obvious that psychiatry in general was not prepared for the massive problem which the war was to present, but this indictment has to be qualified, for in the same fashion no one else was prepared, be they medical or non-medical. What is an indictment of psychiatry is, however, the fact that most psychiatrists entered the military services with insufficient knowledge of the normal reactions to the vicissitudes of everyday life and the slight deviations of young adults under stress, and thus they were unprepared for most of the situations which they were to encounter. The psychiatrists, as was expected, had no difficulty at all in diagnosing, understanding and treating the psychoses when they appeared, but the psychoses represented less than 10% of the hospital problem to say nothing of the overall psychiatric picture.

During the war years only 13,778 patients were admitted to naval hospitals under psychotic diagnoses. Of this number only 9,515 individuals gravitated to the two navy units maintained in Federal hospitals for psychotic patients; 4,538 individuals were admitted to St. Elizabeths Hospital in Washington, D. C., and 4,977 were admitted to the navy unit at the U. S. Public Health Service Hospital, Fort Worth, Texas. Roughly, this hospitalized psychotic rate in the naval service represents an approximate incidence of 1 individual per 1000 total strength Navy and Marine Corps. It is noteworthy that this psychotic rate of 1 patient per 1000 total strength has been the yearly average and has remained nearly constant in the naval service since 1917. The conclusion may be drawn from these statistics that there has been no increase in the percentage of institutional psychotic patients in the Navy due to the impact of war.

This experience with naval personnel is not particularly novel. Bonhoeffer noted the same thing after the last war and in a recent survey which I made in England, France, Belgium and Germany psychiatrists were agreed that in general the incidence of psychoses had decreased rather than increased in both the civilian population and in military personnel. These facts do not bear out the general belief abroad in the land that war brings with it a marked increase in psychotic reactions.

These considerations also help to point the way for the future training of our students and residents in psychiatry, even as they indicate the need for revision of our textbooks. The neuroses and psychopathies in general made up more than 90% of the problem which we encountered, yet the psychiatrists entering military service were in general poorly equipped to handle them. Allowing for the fact that there is a great difference in orientation between caring for the individual and looking out for the welfare of the group, which is one of the cornerstones of military psychiatry, there were still additional deficiencies.

Men trained in state hospitals who entered the military service had in general too little experience in handling the neuroses and the psychopathies. Private practitioners who entered were intellectually aware of the problems posed by the psychopaths, but had dealt with far too few to be effective.

One surprising impression which we gained from our association with psychiatrists who entered the service from civilian life was that men who had been trained in child psychiatry seemed to have less difficulty in grasping quickly the essentials of the problems which were placed before them. We draw no conclusions from this observation which is purely empirical, we simply intimate that the advance of psychiatry and the increased responsibilities of psychiatrists in many new fields call for a thorough revision of our educational methods.

There is another difficulty which was

pointed up sharply by our war experiences; namely, that of the varied and diverse interpretations of our psychiatric nomenclature. One hesitates to introduce this troublesome subject again but, even at the risk of being repetitious and trite, we should mention it here. A valiant effort was made by the Army and the Navy to correct these various semantic difficulties and each service emerged with a carefully considered and worthwhile terminology. In our opinion, however, a satisfactory answer has not yet been reached and the problem needs the ministrations of an authoritative national body.

Diagnostic terminology is of great importance in military service. Its proper usage may mean the difference between the elimination or retention of trained personnel whose services are badly needed. It is important because of its future implications and because some standard for retention or elimination of psychiatric patients must be demonstrated to military authorities who are laymen. It is unnecessary to add that the psychiatrist in a military service is not the last court of appeal. Fortunately our psychiatrists became aware of the problem before harm was done and it was soon agreed that diagnostic labels were to count for little. It was the functional capacity of a man which was to decide his future in the Navy.

In our opinion the most troublesome diagnoses to interpret were those included under the heading of constitutional psychopathic states. The constitutional psychopathic inferiors posed less difficulty for they seemed to be reasonably well understood from a diagnostic standpoint, although therapeutically they remained a no man's land.

Just as surely as the cardiologists could call the pulmonary area of the heart the area of auscultatory romance, could we call the constitutional psychopathic states the area of psychiatric diagnostic romance. Had one asked each psychiatrist as he entered the service (as well as his civilian confreres) for definitions and meanings of the diagnoses which come under this heading, he would have been rewarded by as many different answers as individuals asked. It reminds one of that passage in Alice in Wonderland which states:

"When I use a Word," Humpty Dumpty said, "in a rather scornful tone—it means just what I choose it to mean—neither more nor less."

"The question is," said Alice, "whether you can make words mean so many different things."

Our suggestion for the solution of this problem would entail the meeting of an authoritative group selected by the Nomenclature Committee of the American Psychiatric Association including representatives of various interested societies, whose duty it would be to define and interpret, accept or reject terms much as does the Committee on the Pharmacopœia. Upon the occasion of their meeting after careful preparation, perhaps every five years, this organization could issue a definitive nomenclature which would have the weight of their authority behind it. Undoubtedly there would be many difficulties in the way of this plan but it would be a marked improvement upon the Babel of Tongues which was operative when the Army, Navy, Public Health Service and Veterans Bureau all used different systems of terminology. Because of this confusion the statistics which were gathered by different services will have to be carefully interpreted before any pronouncements are made about them.

It was mentioned above that during the war years 91,000 men were rejected at naval training stations because they were adjudged unfit for military service. These rejections were never made lightly. Manpower was short, the pressure was great and the need for men was pressing. In case of any doubt at all, men were given a trial of duty and only rejected after they had demonstrated their unfitness. The trouble with this system, sound as it seems to be, is that by the time the man is eliminated the law regards him as a veteran—yet he has performed no service for the government.

It is our opinion that despite all that was said and done about selection, we have not yet arrived at a nearly satisfactory solution of the problem. Psychiatrists at every step of the way tried hard to carry out satisfactory selection procedures, but there remained frequent opportunities in induction stations or other places for officials not in sympathy with the program to jeopardize good results by insisting that chances be taken

on questionable men and that large groups be screened in short periods of time, etc.

This problem still requires serious attention. Had we been better equipped with a knowledge of norms, etc., we could have been more vociferous about the problem and obviated many of its difficulties. In addition to the harm done by permitting the inadequate to enter the service, there is also the danger of eliminating men who might perform specified duties adequately. This casting out of babies with the bath water can be ill afforded. Selective Service and Army and Navy records offer some resourceful group an excellent opportunity to engage in a valuable bit of research which will take years to survey adequately.

It became obvious early in the course of the war that the most important prophylactics against psychiatric casualties in the military forces were proper individual motivation and high morale in the various units and groups. In retrospect these factors grow in importance and one's attention is drawn to the parts that familial and sociological elements play in military psychiatric disorders. There is no need to reiterate here the fact that a large proportion of NP casualties in military personnel actually had little to do with the hazards of military service. This was demonstrated by the large number of men who broke down early in their military careers while still in camps and before being exposed to danger.

In our opinion there were two groups which under the stress of war and the haste to build up a fighting force were frequently confused. They were:

1. The truly psychoneurotic.

2. The inept, inefficient, inadequate and poorly motivated individuals who, among other things, demonstrated psychoneurotic symptoms.

At the present stage of our knowledge, it is not always possible to distinguish between these groups except perhaps by retrospective analysis of their performance.

As an example, in the last half of 1943 over half of the men admitted to naval hospitals for psychiatric reasons had had less than one year service. In 1944 the ratio was nearly the same. There are lessons here for sociologists and educators in addition to the psychiatrists. The usual procedure upon finding things askew with the youth of our country is to indict our educational system. The educators in turn sadly admit their deficiencies and try to remedy them under difficulties. In my personal opinion the trouble lies in the education of our youth in their homes. Our educational system shares some of the blame, but the difficulty begins primarily in our home training. Adolescents are not taught enough about their responsibilities and many adults have not learned about them. It is their rights and privileges which are emphasized. This eventually leads to the assumption of an improper sense of values which shows up when they are called upon to make sacrifices, and they are unable to discharge their duties due to improper motivation.

It must also be stated at this time that not all or nearly all of the poorly motivated are sick. In our desire to deal with these individuals scientifically, we must bear in mind the simple fact known to every layman that an individual can by his own free choice decide not to do his duty and then as an afterthought allege various nebulous and vague complaints as causative factors.

Proper motivation in military personnel not infrequently spells the difference between a functioning individual and an NP casualty. It must be emphasized that none of these statements implies that all or even nearly all individuals who were surveyed from the service because of neuroses were poorly motivated. To even think that would be untrue and unjust. What is implied is that many men with neurotic backgrounds and potentialities were able to carry on and even sometimes distinguish themselves mainly because they were motivated to do so.

The psychoneuroses constituted the largest single category of NP surveys[3] throughout the war. In the Navy from July to December 1944 they constituted 39.8% of the total surveys. In the first six months of 1945 it

[3] A survey means that the patient was considered by 3 medical officers and his case presented to the Bureau of Medicine and Surgery. It does not mean necessarily that the patient had to be eliminated from the service. For instance, from July to December 1944 82% of NP enlisted surveys resulted in the man being eliminated from the service, and 83.2% were eliminated in 1945.

was estimated that they would constitute 42.9%. The constitutional psychopathic states accounted for 31.9% of the total in the last half of 1944 and for 29.8% in 1945. As further proof of the importance of motivation, it is interesting to note that in the 3 months which followed V-J Day the incidence rates in these categories were practically halved.

It is obvious that motivation plays a role in these illnesses and the great task which falls to the psychiatrist in this regard is to find some means of differentiating between the persons who are unable to do and those who won't do. Coupled with proper individual motivation is the problem of group morale. Though this is a nebulous thing it spelled the difference between the rise and fall in the psychiatric casualties in the various groups. Ships' crews in the same action and companies of men in the same assault differed widely in this regard and their NP casualty rates were in direct proportion to the presence or absence of high group morale.

Some of the most potent factors which contribute to high morale in military groups are confidence in their own ability, faith and trust in their leaders and a sureness of purpose. When one of these attributes is absent, morale suffers, as is demonstrated by the recent unrest among the troops abroad whose purpose had wavered under prodding and pressure from the home shores. This lowering of morale and its interaction with the lessened morale of the home front resulted in the disintegration of the finest military organization the world has ever seen. The importance of this subject for research and study is obvious.

There were numerous other things learned by experience and by the process of trial and error but only a few can be mentioned here. We confirmed the fact that combat troops are best treated for emotional diffculties as near to the scene of action as is feasible and that the chances of returning them to action decreases as the distance from the scene of action increases. Plush-lined rest centers have an important place but the best locale for the treatment of fighting men is in the area in which they are operating.

Despite much criticism we also relearned the importance of fatigue in military personnel and its relationship to psychiatric casualties. Actually it was nothing new—The Battle of Hastings was lost in part because Harold, who had just returned from Northumberland, had to throw a tired army into battle against the Duke of Normandy. The final campaign of Napoleon in 1814 was lost because his men were fatigued. It is said that in the Trojan Wars the rescue of Helen of Troy was due in part to the fatigue of her captors. The Greeks probably had a name for this fatigue. They did not call it "combat fatigue" but we did and we withstood a great deal of criticism for so doing.

Our difficulties with the diagnosis, "combat fatigue," were many. They ranged from the scoffers who believed it a flight of fancy to the avid young man who considered it a cover-all and a likely scrap basket in which to throw all psychiatric cases. In between these groups we dealt with the criticisms of psychiatrists who had not dealt with the problem but were sure that we were wrong.

As an extreme, let us admit at once that combat fatigue is a psychosomatic compote if you will, a semantic expedient and an emotionally neutral way out of a difficult diagnostic dilemma. The use of the term was made necessary by a pressing, practical situation. When the diagnosis was made according to the standards laid down by us and which have been published several times, the diagnosis was a legitimate one and we predict that more will be heard regarding it.

To be a purist about these diagnoses is all right providing that one is far enough removed not to have to cope with the tyranny of diagnostic labels. In the military service one has to think not only of the immediate situation, but of the welfare of the group and of the country and of the patients' future careers in and out of the service. To label a man hastily and without proper survey of the situation is an injustice. To military authorities charged with winning a war a line has to be drawn somewhere. Certain diagnostic labels mean certain things and require definite action. They work with blacks and whites and avoid the various shades of gray.

Like that famous obstetrical condition in which you are or you aren't, military psychiatry says you are or are not fit for duty. We

cannot decide these things by a whim, but must lay down certain rules. If we admit that some men stepped through the sieve marked combat fatigue who were really "goldbrickers," we hastily add that they were few and the mesh of the sieve was a coarse one of necessity. We are not sorry in retrospect that we used the term, we still believe the condition was a clinical entity and we also believe that combat personnel from the commanding officer to the apprentice seaman can show the signs of combat fatigue if the stress is great enough.

The use of group therapy and group psychotherapy received a decided impetus in the military service for the military atmosphere furnishes a natural milieu for its use. By the same token the convalescent hospital came into its own. Already things learned in these two advances are being utilized in England in civil replacement units and in the Roffey Park Rehabilitation Center for industrial workers.

Mention should be made of the extensive use of audio-visual aids in the naval service. Films were used for instruction purposes as well as for aids in diagnosis and treatment. Several interesting studies were made measuring audience reaction by infra-red photography, etc., all of which have been described by Commander Rome who was the prime mover in this type of work in our service.

In a more general way one of the most important things which happened to psychiatry during the war was the spread of its doctrines to the specialists in other fields because of propinquity and necessity. In many of our general hospitals the NP services rose to a par with the medical and surgical services, which is where they belong. The treatment of non-psychotic NP patients in general hospitals—formerly frowned upon—took a new lease on life. In addition to this, in some of our naval hospitals the number of psychiatric consultations far exceeded the number of admissions to the NP wards. Also, the experiment of a remote treatment and convalescent ward in a general hospital was tried when the treatment unit at Swarthmore, Pa., was set up as part of the Philadelphia Naval Hospital.

There are several pressing psychiatric problems which the military psychiatrists hand back to their civilian confreres in practically the same condition in which they were received, namely, the problems of the constitutional psychopathic inferior and the homosexual. To my knowledge no satisfactory solution was found to the problems posed by these individuals and, like the civilian psychiatrist, the medical officer simply passed them on unless they became entangled in serious trouble. So far as I can determine, the same situation applied in England, France, Switzerland and Belgium. Germany tried to meet the problem of the psychopaths by forming them into battalions and assigning them to hazardous duties. Several German psychiatrists informed me, however, that whenever possible they were eliminated from the service. It is obvious that here are two serious problem groups which require further investigation and perhaps a cooperative attempt by psychiatrists and sociologists to find some solution for them.

In summing up the problem, should we be called upon to comment on our projects in the future, we would note that psychiatry—which at present is in a transitional state—is certainly destined for further resurgence. Everywhere in our country and in Europe there is renewed activity and interest. Psychiatry in the regular military services is bound to move forward. The Navy at present has 10 residents in some of the country's best known clinics, as well as many training plans of its own.

In Europe the psychiatric trends discernible to me were distinctly toward the organic side, not only in France and Switzerland but in what remains of German psychiatry. In Great Britain I was impressed by the emphasis and interest in the sociologic aspect of psychiatric problems.

Continental psychiatrists will have an additional problem to deal with for the next few years because of the shortage of food and heat. When food and heat are scarce, hospitalized psychotic patients usually fare worse than does the general population which is able to forage for itself.

In consequence of these deficiencies the mortality rates will probably rise in hospitalized psychotic patients. Tuberculosis will make inroads into places in which it was only a minor problem before—the in-

cidence rates of the disease have already begun to rise. The problems of hunger and cold in these continental institutions are real ones I assure you—I saw evidences of them for myself.

In our own country it would not be surprising to see the incidence rates of psychoneurosis take an upward turn, not only because the condition will be recognized more readily, but over and above this. If the neuroses increase in an atmosphere of insecurity, then civilization in its advance brings with it the seeds of neurosis. The more civilized and the more advanced we become from a technical standpoint, the more the opportunities for individual insecurity to manifest itself.

Industrial psychiatry in company with industrial medicine will undoubtedly expand greatly. This field will benefit vastly by lessons learned in the wars as will the field of psychosomatic medicine in which much more attention will probably be paid to the emotional overlay upon actual organic diseases. There is much to be learned about these problems by an examination of the statistics of military service in which literally hundreds of thousands of men between definite age groups were under medical observation.

There is one other lesson which I think psychiatry itself can learn from the military service—that of team play. This cooperation by all hands is the most powerful factor in any force. In battle all men are equal and all fight on the same team. In the same fashion in the military service psychiatrists of different persuasions worked together in harmony and fought on the same team to the benefit of all concerned. The lion and the lamb were able to lie down together comfortably and to make a go of it. This lesson of cooperation points the way for civilian psychiatry, in which mutual tolerance and understanding will now be required to a degree much greater than ever before if we are to advance the cause of the mentally ill.

We are entering a new era, one in which the use made by erring human beings of the discoveries of science may be outside of the control of psychiatrists, but it can hardly be outside of our concern as human beings. There is a wise old ditty which puts it well:

> The trouble with nations
> Is human relations
> Especially with you and with me.

We can no longer isolate ourselves in our own little spheres, apart from the rest of the world, and remain aloof from what is going on outside. It may be that due to the authority with which we are invested, we can be of help in some of those relationships which must be solved if civilization is to move on to that spacious era which science holds forth to us as a future possibility. To do this we must first have solved our own intramural problems.

ACCOMPLISHMENTS OF PSYCHIATRY IN THE ARMY AIR FORCES [1]

COL. JOHN MILNE MURRAY, U.S., A.A.F.[2]

The duties and obligations of the position of consultant in the military service represent a stewardship, the acceptance of which implies among other things, responsibilities to one's colleagues. This presentation aims to be a report of the stewardship of the chief consultant in psychiatry to the Army Air Forces and to inform colleagues of plans formulated and work accomplished while the author served in that capacity. The report attempts to include all the areas of these endeavors as well as the specific means by which it was hoped that psychiatric knowledge could be effective in solving the particular problems, medical and administrative, encountered by the Air Forces. In the final analysis the effectiveness of the psychiatric program will be judged by one standard—in what manner was it helpful in making the forces more effective in the fulfillment of their tasks and how adequately was it used in alleviating the sufferings of those who were hurt in the course of military duties.

In order to accomplish these purposes reference now is made to a memorandum submitted early in April 1943 to the then Air Surgeon (the medical director of the Army Air Forces), entitled "Plans and Survey of Psychiatric Problems in the Army Air Forces." This memorandum attempted to cover fully the Air Forces' problems in which psychiatry could offer definite and specific aids. In the report the following recommendations were included:

Section 1. A plan for the use of psychiatric knowledge and techniques in the selection of aviation cadets, and in the evaluation and maintenance of cadets during their training period.

Section 2. The establishment of consultation services in the technical training command replacement training centers.

Section 3. A plan for the use of psychiatric knowledge and technique in the evaluation and maintenance of combat personnel, particularly those showing undue anxiety and psychiatric symptoms due to combat experience.

Section 4. A plan for the management of psychiatric problems occurring at smaller air fields.

Section 5. Problems of the future. Under this heading was included a forecast of the relatively high incidence of psychiatric problems which could be expected in the Air Forces and the importance of the relationship of these to other medical problems. Plans were outlined for meeting these problems.

Section one. In 1942 selection of aviation cadets was dependent upon a series of psychological tests and a clinical examination called the "adaptability rating for military aeronautics." The second phase of this examination usually was performed by doctors whose training was completely inadequate for such duties. The psychological tests functioned effectively for the determination of special skills, aptitudes, intelligence and interest in flying. Their use proved an excellent tool in determining a man's ability to pass cadet training requirements. On the other hand, the predictive value of these tests for those qualities essential for successful combat flying proved to be practically nil. The clinical examination referred to above as the A. R. M. A. attempted to ascertain, by means of personal and psychiatric histories and performance histories, pertinent details of the individual's life experiences. It sought to establish the presence or absence of psychiatric symptomatology, emotional instability and signs of behavior which experience had proved undesirable in individuals who were to perform such hazardous duties as combat flying. At this time, the attempt was made to determine these facts in an interview of 5 or 10 minutes duration with each individual. The examinations were given by aviation medical examiners with no special psychiatric training beyond the limited course in basic psychiatry given as part of the training at the School of Aviation Medicine at Randolph Field. Although the basic principle of this examination was excellent and the data sought for in it of great value, it was as impossible to obtain such data in one short sitting as it was for the

[1] Read at the 102nd annual meeting of The American Psychiatric Association, Chicago, Ill., May 27-30, 1946.

[2] Formerly Chief Consultant in Neuropsychiatry in the Army Air Forces, HQ AAF, Washington, D. C.

Russians to stop the Germans in one stand at the borders of Poland. Therefore, the memo approved the principle and the importance of the A. R. M. A., but it went on to state that "failures of method result largely from its hasty application and lack of special opportunities for the observation of cadets in trying situations." It was therefore recommended that psychiatrists be placed strategically at classification centers and training fields in order to follow the emotional vicissitudes of cadets in training and also to spread the influence of their special knowledge among the flight surgeons who were working with cadets during their training program. The special hazards of the flying training program created excellent test situations in which flight surgeons could observe and evaluate anxiety reactions in the students. Cadets temperamentally unsuited for combat flying could be picked up most readily and surely and thereby eliminated during these phases of training. Similar test situations proved later in the war to be the most effective means for such screening. This plan was to be accomplished under the guidance of psychiatric consultants who would be available to flight surgeons to help them evaluate the cadet's anxieties and symptoms. In this way, a defense in depth against the problem of the unsuitable cadet would be established. An ill-chosen cadet missed at one point would be picked up at the next phase, or the next. Likewise an increasing body of data regarding the emotional stability of various types of personalities under hazardous situations would be created and incorporated in the techniques of the selection process. Later in the war many flight surgeons wise from overseas experience spontaneously asserted that this was the one way by which cadets temperamentally unfitted for combat flying could have been eliminated early during the course of selection and training. They also unanimously stated how badly they lacked the special knowledge of anxiety which such first-hand clinical training would have given them. Ninety percent of their medical duties dealt with such problems. The recommendations of this section, however, were rejected by the Air Surgeons' Office and the Training Command. It is safe to state that the rejection was not dependent upon the lack of personnel, as the plan called for only a few additional psychiatrists. It is believed that the press of circumstances will soon force the adoption of such a practical program. So much for section one.

In Section two an outline for the establishment of consultation services in the Army Air Forces technical training command replacement centers was submitted and recommended. These units were to be modeled after those established by Freedman at Fort Monmouth and Cruvant at Fort Belvoir with which you all are familiar. These units were models and later became a standard pattern throughout the Army. Their value and effectiveness were repeatedly demonstrated throughout the war in all branches of the service. In the AAF such units were first established at Drew Field, Florida, by Captain Lewis Robbins and at Sheppard Field, Texas, by the author. These, as well as other units which were established later in the Training Command were ultimately rendered useless by the Surgeon of the Air Forces Training Command, who was unsympathetic to their purpose. Other units established in the Continental Air Forces were accepted and maintained because of the sympathy and understanding of their commanding generals. It was a grave misfortune that they were never accepted in the Training Command as it was there that serious psychiatric problems were first met in the newly inducted recruits and adequate means of properly handling these men were so badly needed. It is fair to state that in the Training Command these problems were never accepted as medical ones and that therefore, modern psychiatric knowledge was never really brought to bear upon them. Oftentimes, line officers understood these matters where medical officers in command completely failed in this regard.

Section three of the memo dealt with psychiatric problems in overseas theatres of operation. It recommended the organization of rest camps not too distant from the fields of operation where the emotionally distressed flyer could receive the benefits of modern psychiatry to help him with acute anxiety reactions. To accomplish this effectively it was advised that a psychiatrist of Grade A com-

petence be assigned to the Commanding General of each Air Force in order to insure the establishment and effective operation of these rest and treatment units. In December of 1943 an additional memo was submitted recommending the establishment of combined treatment-teaching centers (such as were later developed in this country at Don Ce-Sar and at Fort Logan) in the various theatres in order to indoctrinate theatre flight surgeons in the elements of modern psychiatry, knowledge of which was so badly needed in their local problems. The Air Surgeon's Office took no steps to give effect to these recommendations. It seemed that the psychiatric implications of these problems could not be recognized or accepted. In the field some of these recommendations were carried out independently and in a small way, action resulting from the force of circumstances.

The psychiatrists attached to the Eighth Air Force in England established a fine teaching program for the indoctrination of flight surgeons in that command. Although the school fulfilled a very important role in an effective, if limited way, it never received the sanction of higher headquarters. Therefore, its influence and its activities were always greatly limited, it never was able to attain the stature which was its just due, and it died too young. Such developments as these were far too little and usually far too late. Psychiatric knowledge was applied in a very mild way in spite of the fact that an overwhelming majority of flight surgeons in the theatre were desperately hungry for such knowledge. Without fail, all flight surgeons returned from overseas who took the course at Fort Logan would say, "For God's sake why didn't they give us this in time to help us over there?"

Section four in the memorandum dealt with the crying need for psychiatric services at the smaller flying training fields, where no such service was provided. It was recommended that smaller fields be organized into groups arranged according to geographical locations as satellite units around a larger station. There a psychiatrist in residence could be made available as a travelling consultant for these smaller units as needs indicated. In this way, psychiatric help could be extended throughout the entire Air Forces training program. These recommendations were not accepted by the central office or by the headquarters of the Training Command. However, the plan was adopted independently by the Gulf Coast Training Command in 1943 by the then Surgeon of that command. An effective piece of work was accomplished thereby in this limited area but was inactivated by the central headquarters of the Training Command when the sponsor was sent into the theatre. In section four it was also recommended that a survey of the psychiatric personnel be made in each of the AAF commands by specially selected psychiatrists. A comprehensive questionnaire was submitted which would evaluate the training, abilities, experiences and interest of each individual psychiatrist. This survey was partially completed and was very helpful in the strategical placing of psychiatrists in those areas where it was accomplished.

Section five dealt with problems of the future. First, it was predicted that because of the intensity of the stresses of World War II huge numbers of the men who were fighting would be bitterly hurt emotionally and would require medical treatment. Second, it was felt the knowledge and techniques of modern clinical psychiatry offered the most promising hope of meeting this problem. Third, attention was called to the great shortage of competent psychiatrists needed to deal with the tremendous numbers of casualties that would undoubtedly come back to this country suffering from war neuroses.

Three methods were advised for the solution of this problem:

1. Recruiting.
2. More equitable distribution of the psychiatrists then in the Army in favor of the Air Forces.
3. A program of training.

Little could be done regarding the first two considerations, but a combined treatment-teaching program utilizing on-the-job training methods was recommended for physicians who had a definite interest in psychiatry. Lack of training and of earlier experience in psychiatry was to be overcome through continuous supervision by experienced psychiatrists. This was the basic idea of the plan and the memo went on to state,

"At present the Air Forces need to keep an eye to future developments or one day the need for NP men will be more than extremely acute. We should begin now to set the stage for a later training program to be activated as needs arise. Tentative formulation of that program would include the objective stated in Paragraph 3, *i. e.*, the focussing of NP casualties returned to this country at a given center. The second objective would be to staff that hospital with excellent neuropsychiatrists whose special training has been in the treatment of acute psychoneuroses. These men should likewise be qualified as teachers in this field. . . . . The training and experience of neuropsychiatrists is extremely variable and few are available whose special training fits the particular needs of the problem we have to face. . . . . If and when the acute need for this type of man arises we will be forced to turn to younger men and from them expect the greatest help in accomplishing some solution. . . . . We, therefore, should be prepared with competent teachers and a center of adequate case material to go ahead immediately with a training program, when the actual need first appears on the horizon. . . . . Psychiatrists at work with these problems will need numbers of men working under them with a background of training in psychology, social workers, personnel workers and so forth. . . . . The army should recognize the need for this special type of worker and accord these men the status of specialists. The Air Forces should develop facilities for the additional training of these men when it seems indicated."

As you see, the essence of the proposed program was to combine a treatment-teaching program of on-the-job training.[8] The plan also included the organization of the so-called "psychiatric team," composed of psychiatrists, junior psychiatrists, personal physicians, psychiatric social workers and clinical psychologists. It also embraced additional training of this personnel which made up the team. Though the front office did not accept these recommendations the picture was not completely dark. Through the persistent and untiring activities of the chief of professional services in the Air Surgeon's Office, these ideas were finally carried to fruition, at least in a small way. As a result of his support and cooperation a unit organized on the plan outlined was created at the Don Ce-Sar Hospital, St. Petersburg, Florida, early in 1944. A year later, another unit was established at Fort Logan, Colorado, with an enlarged training program which included the teaching of social workers, clinical psychologists, nurses and chaplains, as well as physicians. In conjunction with the national headquarters of American Red Cross, over 20 Red Cross social workers were included in each class.

After the establishment of these units numerous inspections and surveys revealed the effectiveness of the program. It was demonstrated in the character of the work done by the trainees as well as in the therapeutic results in the patients treated. In spite of this, the existence of these units was always a tenuous one. The front office made frequent gestures to close them and repeated efforts on the part of the chief of professional services were necessary to preserve their existence. After V-J Day treatment was forgotten, separation alone was under consideration and these units were quickly disbanded.

As one looks back now upon the character of the work accomplished in these hospitals, it is evident that an earlier and more widespread acceptance of the problem would have led to a broader use of such units and better care of the individual patient. It was the experiences of psychiatrists of the AAF that to be effective a program had to be based upon individual definitive care utilizing all of modern psychiatric knowledge and techniques.

An estimate of the number of cases treated adequately by such individual definitive techniques in AAF convalescent hospitals would be no greater than 14,000 or 15,000. This is a small fraction of the hundreds of thousands of such cases among AAF personnel returned from overseas. It is safe to assume that out of the Ground and Service Forces and Navy returnees needing help no higher percentage received adequate treatment for their war neuroses. Experience throughout the war in Redistribution Stations and con-

[8] Murray, Lt. Col. John M. Psychiatric Evaluation of Those Returning from Combat. J. A. M. A., 126: 148-150, September 16, 1944.

valescent hospitals and later in Separation Centers shows that somewhere between 15 and 20% of all returnees need such definitive treatment. Although we as psychiatrists may have done our best to set up adequate treatment programs, the actual numbers receiving such treatment in relation to the overall number of sick returnees indicate that these efforts were woeful failures. This land is loaded with men needing such treatment who just never obtained it.

The failure can not be excused on the ground of the lack of psychiatrists, because experience has proved that doctors could have been trained for this function. It can not be excused on the grounds of a shortage of medical personnel available for such training. Early in the summer of 1945 the Medical Adviser to the Senate Military Affairs Committee stated that there were over 17,000 doctors in the Army whose presence there could in no way be justified by military necessity. A sincere interest in the care of the men who were hurt emotionally by the war would have soon led to the adequate use of this pool of doctors in a sound treatment program. The author submitted a memorandum written early in the summer of 1945 to Brig. Gen. E. J. Stackpole, representative of the Army with the War Manpower Commission. In it, an outline of the staff necessary to operate a standard 1000-bed convalescent hospital for psychiatric care was included. This called for the following personnel—

1 Neuropsychiatrist as chief of service.
2 Neuropsychiatrists as assistants.
16 Personal physicians (who should have taken the course in psychiatry mentioned previously).
8 Psychiatric social workers.
2 Clinical psychologists.

Such a unit could provide 3000 individual psychotherapeutic hours per month for a hospital population of 1000 patients. This would accomplish reasonably good psychiatric treatment for the run of the mill cases of war neuroses and would turn out a large majority of cases 80-85% recovered. Such a program certainly made no demands for large numbers of personnel. What a pity that many of our doctors could not have been trained as junior psychiatrists and have served in such a program to help the great numbers of seriously sick returnees! Actual war experience had made these doctors anxious for such training.

The responsibility for the failure to provide adequate psychiatric preventive and treatment programs for service personnel in this war lies, in the author's opinion, squarely on the shoulders of the medical command. A lack of understanding of the essential medical nature of emotional disorders was the chief reason for this, as well as a basic unwillingness to accept from psychiatric knowledge what could be of benefit. Moreover, in certain medical quarters intense personal hostility toward anything psychiatric blocked any constructive efforts.

It is fervently to be hoped that in the future mistakes born of such short sightedness will not be repeated. Wars today, accompanied by their terrific mechanical developments create emotional stresses which are bound to hurt seriously large numbers of those engaged in them. It is the basic and major function of military psychiatrists to care for these people who have been made emotionally sick by the pressures and stresses of modern warfare. We psychiatrists are primarily doctors. During this war we were called upon to perform many auxiliary and secondary functions, such as advising in programs organized to build and maintain morale, motivation, etc., helping in problems of selection, in screening programs, and supplying advisory services to line officers. The use of knowledge in preventive psychiatry, particularly in overseas theatres of operation, wrote a brilliant chapter in the medical history of the war. All of these supplementary functions were well carried out and fulfilled during the war but let us not forget that first, last and always, we are doctors and as such, it is our prime duty to take care of sick people whose illnesses fall within our special areas of knowledge. If we fail in this regard or are satisfied to settle for anything less, we have sold our birthright.

At this point it is a pleasure to become more optimistic and to state that it seems that the Veterans Administration in its early endeavors has picked up the ball fumbled during the war. It appears to be moving toward establishing an adequate psy-

chiatric program based upon the needs of sick veterans. It has recognized early that the first step in any psychiatric treatment program must be a teaching-training one in order to overcome the shortage of personnel. It likewise is devising on-the-job training programs with emphasis on the understanding and treatment of the acute situational breakdown such as is seen in the war neuroses. The Veterans Administration is aware of the fact that the general practitioner with a minimum of training will be needed to care for men in the outlying areas where no psychiatrists are available. These men will need minimal training. Psychiatrists needing supplementary training will be provided with it. And the Veterans Administration is turning to the leaders of American Psychiatry for assistance and guidance, anxious to use such help in formulating, organizing and operating their programs. This is indeed a hopeful indication.

And now to evaluate the psychiatric developments in the Army Air Forces by the criterion set up in the introduction—in what manner was psychiatry helpful in making the Forces more effective in the fulfillment of their tasks and how adequately was it used to alleviate the sufferings of those who were hurt in the course of their military duties? The answer frankly is this—to a decidedly limited degree. It will be ever thus until men in authority, with whom rests the ultimate power of decision, have breadth, vision and courage behind their desire to help those in the lower echelons who are hurt by war.

PSYCHIATRY IN PROSPECT[1]

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The position in which psychiatry in this country finds itself today is unique. The dawn of the year 1941 found the specialty still in its adolescence, with great dreams and hopes which had not yet been given the test of large scale application. Those psychiatrists who served in the armed forces or on induction boards have borne witness time and again of our unpreparedness both in planning and techniques for the great demands made upon us. No group of physicians was more short of personnel than psychiatrists. Psychiatry as presented to the medical student did not challenge his interest nor hold as much attraction for him as did many other branches of medicine, with the result that few physicians possessed either adequate knowledge of, or interest in, the subject. Hence, relatively few physicians entered the field each year.

Between 1941 and 1946 psychiatry was subjected to the greatest and most trying experience of its existence. It has come out of this difficult period with more maturity and a fund of invaluable experience which can be drawn upon in discharging its obligations in the years to come. We have a more realistic idea of what psychiatry can do and of its limitations. But, of even greater importance, is the fact that now, more than ever before, the general public recognizes the need for mental medicine and is expecting to have this need filled. Let us fervently hope that the first few years of this post-war period will not find us as unprepared as we were at the onset of World War II.

To hear our colleagues tell of the development of psychiatric services in the Army, Navy and Air Forces is to hear an account of unflagging effort in the face of great obstacles, of ingenuity, and of the development of practical applications in the field of preventive psychiatry. The contributions of those men and women were great, indeed, but the advances they have achieved must be further developed and more widely applied if we are to reap the full, peace-time benefit from their wartime labors.

In retrospect, it would seem that our pre-war condition was due to several factors: lack of trained personnel, lack of much necessary knowledge concerning the etiology of mental illness, lack of methods for dealing with relatively large numbers of such cases, and lack of an awareness on the part of the public, both military and civilian, and of many psychiatrists, concerning the extent and limitations of the role psychiatry should play in prevention and treatment of illnesses. These factors, operating in concert, produced the problem with which we were faced when we began to transform our citizens into military men and women. The obvious conclusion must be drawn that in the field of psychiatry and mental health our country was not prepared for war. The strides made by psychiatrists in the armed forces reflect all the more credit because of this; and many advances will not be fully appreciated until they are applied to civilian populations.

A concept that is not original or new has arrested the interest of many of us. This concept was developed in our training days, but it has since taken on new significance. We have always thought of mental disorders as illnesses, of course; but they also constitute a public health problem, since such is said to exist whenever a morbid condition becomes so widespread in the population, so serious in its effects, so costly in its treatment that the individual cannot deal with it unaided. Certainly, in view of the data we now have, incomplete as they may be, we must conclude that psychiatric disorders constitute a problem of this character which requires immediate and energetic action.

In all public health programs the grand strategy is the same. Active research must be conducted into all phases of the problem to determine the causes and most efficacious methods of prevention and treatment. A

[1] Read at the 102nd annual meeting of The American Psychiatric Association, Chicago, Ill., May 27-30, 1946.

sufficient number of personnel must be trained to effectively deal with all aspects of that problem. Sufficient clinical services of the best possible quality must be provided for both in-patient and out-patient care. Finally, but by no means of less importance, both the medical profession and the public must be brought to an intelligent understanding of the problem and of the part they can play in solving it. There is nothing in this strategy which is not applicable to a mental health program.

The concept of mental health and mental illness as a public health problem and utilization of the strategy which has proved most successful in coming to grips with health problems in other fields is the cornerstone of a national mental health program which is now being considered by the Congress. There is nothing essentially new in what is planned, nothing that has not been advocated before; but now, for the first time, there would be national legislation which would encourage the development of more effective mental health services for all of the people.

It is extremely difficult to single out any aspect of the program as most important. The situation in which we presently find ourselves, however, makes it imperative that certain phases be stressed at the outset.

It is a fact well known to all of us that there is an acute shortage of all types of personnel in the mental health field. No plan, however well formulated, can be effective unless there are available sufficient numbers of trained individuals to translate it into action. Due to the fact that many areas of the country offer little or nothing to attract well-trained psychiatrists, the situation is further complicated by a very uneven distribution of those few persons who are qualified. There are several states in which are to be found only a handful of psychiatrists and in at least one there is none, according to the latest directory of the American Psychiatric Association.

This shortage means, in its final analysis, that until very recently the field of psychiatry failed to attract more than sufficient individuals to offset the attrition in our ranks. There are a number of reasons for this, but by far the most important is that psychiatric objectives, principles and potentialities are not sufficiently understood even by the majority of the medical profession. Until proper training is given to undergraduate medical students, it will require major disasters such as the recent war to demonstrate psychiatry's role in medicine and create a desire for further knowledge of the subject.

While it is desirable for the medical student to acquire a classificatory knowledge of mental illness, this should not be the major objective of the instruction. It is much more necessary to develop an appreciation of the role emotional disturbances play in illness and of the influence illness exerts on emotional states. Upon graduation the young physician should be as well equipped psychiatrically as he is surgically or medically. In these latter fields his instruction has given him not only a degree of skill, but also has made him aware of his limitations. When these are reached he has learned to call for specialized assistance. This same situation should exist in the field of psychiatry. Many cases of minor emotional difficulty and maladjustment can be treated by the family physician as well as by the specialist—nay, they often can be better treated by the properly trained and equipped family physician who is and must always remain the first line of defense against the illnesses and infirmities of man in our society. To so prepare the physicians of the future, it will be necessary for many medical schools to effect some reorientation of their faculties and to improve, extend, and redirect their psychiatric teaching. The subject is so important that it cannot be handled in a perfunctory manner. Much of the success of a teaching program depends upon the teachers themselves. It is well known that many young men have become interested in particular fields of medicine because some member of their faculty impressed them deeply, thereby profoundly influencing their thinking. The members of the psychiatric faculties must possess, therefore, attributes in addition to being thoroughly prepared in psychiatry. They must command and hold the respect of the student both as teachers and as physicians. This means that much attention must be given to the training and selection of teachers of psychiatry. Experience has shown that in those schools where psychiatry

is properly presented by physicians who are good teachers in every sense of the word there is found the greatest understanding of the subject and the greatest interest in the field as a specialty.

There have been various estimates made of the number of psychiatrists required to meet the needs of the country. It is submitted that any figure given is at best a very rough estimate since we know with no degree of accuracy the extent of our problem. It would appear to be a fairly conservative and safe statement, however, that the demand is so far ahead of the supply that we must develop all possible training centers. There is a wealth of clinical material in many hospitals which would be valuable for teaching purposes but which is not being utilized because those institutions do not meet the standards set for qualification as teaching centers. Every effort should be made to bring these hospitals up to standard; and in such effort this Association must take an active and aggressive part. This improvement will, of course, have a doubly beneficial effect since it will not only make it possible for additional physicians to be trained, but will also result in better care and treatment for patients.

Since it is not the purpose of this paper to discuss the details of training, suffice it to say here that while every effort must be made to develop additional training centers as rapidly as possible, quality must not be sacrificed on the altar of urgent need. For the present, at least a portion of the trainees will have had some supervised experience in psychiatry. Those medical officers of the armed forces who have had short courses of training and a wealth of clinical experience while in the service can be developed into fully trained men more rapidly than would otherwise be possible.

While training has been discussed here as it relates to psychiatrists, it must be remembered that there is an equally urgent need in the allied disciplines. Those fields must not be neglected as training programs are developed. Proper mental health services require the coordinated efforts of all these disciplines. The pending legislation would authorize the Public Health Service to give assistance to schools and institutions in the development of adequate training facilities for the preparation of personnel needed in the mental health field.

While the manpower shortage is an immediately pressing problem, the search for further knowledge and the development of new and more effective techniques is of the utmost importance. Every effort must be made to encourage and foster research. There is so much yet to be learned that the task of finding the information calls for a wide variety of skills. As rapidly as possible our hypothesis must be replaced by verified information, and our treatment procedures must be based on more certain knowledge of the cause and nature of mental illness.

Many striking comparisons can be drawn between mental illnesses and tuberculosis. Both, when fully developed, are chronic conditions which require long periods of hospitalization, in a great many cases at public expense. It is within the memory of living man that tuberculosis was considered with fear and loathing and its sufferers were stigmatized. For many years public indifference resulted in neglect and many abuses in institutions. Both are serious public health problems. As tuberculosis was better understood, it was possible to institute more rational and effective treatment procedures and case finding and preventive work moved forward rapidly.

It is granted that the problem of mental illnesses is a more complex one and that the natural history of the two conditions is quite different. It is further granted that, in the light of our present knowledge, case finding and preventive measures cannot be so precisely developed. Yet, there are vital facts that can be learned and built upon. There must be opportunity to follow up leads which we now have and to apply in the field what is learned at the bench.

More opportunities must be developed for investigation both in the basic sciences and in the clinical field. From the public health standpoint, there must be epidemiological studies made of the problem. Great advances have been made during the recent war in developing case finding tools. These are still in a crude stage and are not yet perfected to the point where they can be applied to large numbers of the population,

although it seems quite possible that this can be accomplished. It is not anticipated that a quick and precise method comparable to the serological test for syphilis or the photoroentgen examination for tuberculosis will be developed; but if an easily applied and reliable screening method can be devised it will be possible to bring to light and study many cases of personality disorder which would not come to the attention of the psychiatrist until the symptoms were more advanced. We would then have a real opportunity to try preventive measures. In addition to the advantages to be gained from the therapeutic standpoint, the possibilities for study and evaluation of suspected etiological factors would be greatly enhanced. If a study is to be made to determine possible epidemiological characteristics of mental illness, it can only be carried out on populations in which the ill can be identified with certainty and studied in comparison with the mentally healthy portion of the population from every possible physical, psychological and sociological standpoint. Particularly is it important to study those individuals whose illness is not yet full-blown, but incipient, to borrow a term from the field of tuberculosis, and who would not seek the assistance of a physician for some time to come. These cases could best be identified by means of a screening method.

To implement a large-scale program of research, grants-in-aid could be made to institutions and to individuals. The pending legislation further authorizes the establishment in the Public Health Service of a National Institute of Mental Health. The present plans call for the erection of a structure which would consist of a psychiatric hospital of about 200 beds and of the necessary laboratories for investigative work. Research fellows could come to the Institute to study all phases of the cause, diagnosis, prevention and treatment of mental illnesses. It is believed that through the development of additional research centers and the exchange of ideas and information it will be possible to more rapidly acquire that fund of knowledge so necessary for the amelioration of mental disease and the promotion of mental health.

There is much that can be done, however, with the knowledge we now have. As personnel become available it is essential that clinical services be expanded where they now exist and developed in those areas where none are available. Clinical services must be thought of as care and treatment of individuals both in hospitals and outside of them. Within the hospital, active treatment must receive at least as much emphasis as care. This does not imply less attention to the welfare and comfort of the patient. On the contrary, every effort must be made to improve hospital conditions, but it does mean that institutions must not be considered by either staff or the general public as only domiciliary institutions. The same attitude must prevail in a mental institution as is found in a modern and enlightened sanatorium for tuberculous patients. The goal must be to effect a recovery and to return the patient to his community equipped to make a social adjustment. Admittedly, in the light of our present knowledge, this goal cannot be achieved in every case, but it must be the goal of every member of the staff, if they are to remain alert and progressive, giving the best possible service to those given to their care.

For many years we have been aware of the needs in our mental hospitals and have been pressing for improvements which would satisfy them. This pressure must continue unremittingly, but, without in any way relaxing our efforts in this direction, there is another great need which must be met in the very near future. Properly staffed out-patient clinics are as essential as adequate hospital care and treatment in a well-balanced mental health program since such clinics serve three principal and necessary functions. In the first place, through the medium of the clinic, hospitalization may be postponed or prevented. Secondly, where hospitalization becomes necessary they make possible earlier discharge in many cases since additional treatment and supervision can be provided. The third function is in the field of public education. The clinic, when doing its full job, develops in the community an awareness of the need for early diagnosis and treatment and a better and more rational understanding of mental disease and mental

health, which is one of the objectives of a public health program, as was stated earlier.

In the beginning the services envisioned here should be available to all members of the community through a non-specialized, all-purpose clinic. As there is need for special services such as child guidance clinics or industrial psychiatric clinics, they can then be developed as a natural offshoot of the parent clinic, still remaining a part of the community health services. The basic objective should always be, however, to provide a well-rounded and integrated program for the whole community and there should be equal opportunity for all the people to receive care without regard to age, sex, occupation or other possible restrictions.

Clinical services of this type must eventually be available throughout the length and breadth of the land. With the possible exception of some of the more sparsely settled and inaccessible regions, psychiatric services must eventually be available and accessible for everyone. When this is the case and a patient is able to receive skilled attention and early treatment, many cases can be handled on an out-patient basis who now must continue to struggle with their difficulties with less and less success until they finally require hospitalization. Further it will be much easier to develop a satisfactory and workable extramural program for patients who must receive treatment in hospitals.

There must be close cooperation and free exchange of information between the hospital and the community clinics. Through the medium of the clinic the hospital staff can better understand the milieu from which the patient came and can more effectively prepare him to return to it.

If clinics are to properly serve the functions outlined here they should not be overloaded. From the information now available it has been estimated that the minimum requirement for the nation as a whole is one clinic for each 100,000 of the population. Such a clinic, whether fixed or mobile, should be on a full-time basis, delivering approximately 150 hours of service per month.

An attempt has been made here to outline a program of mental health now in prospect. This program is built around the concept that mental disease is a public health problem and that this problem can be successfully attacked by employing those methods used in dealing with other public health problems. There is nothing described here which has not been proposed before, there are no new concepts or techniques suggested. The thinking of many men in the fields of psychiatry and public health has been incorporated in the plans which have been discussed here. This task cannot be accomplished by a few; it will require the combined efforts of all of us to bring about the improvements and developments needed. There must be the same unanimity of purpose and pooling of effort in peace as there was in war if the objectives of expanded training, accelerated and coordinated research, more extensive community services, improved hospital care, and a more rational understanding of mental disease on the part of the public are to be attained.

DISCUSSION OF PAPERS BY GENERAL MENNINGER, CAPTAIN BRACELAND, COLONEL MURRAY AND DR. FELIX

DR. EDWARD A. STRECKER (*Philadelphia, Pa.*).—I call your attention to the gleaming star on the uniform of the last speaker. Not only is it a symbol of well deserved recognition but it is a measure of great progress made from the early days when there was the somewhat half-hearted offer of a Lt. Colonelcy to head the NP service in the Army to the more proper rank of General—from the vague and shadowy semi-oblivion at the penumbra of the solar radiance of medicine and surgery to equal planetary brilliancy in the heavens of military medicine.

If my discussion were merely laudatory, it would be boresome. In the short time at my disposal I should like to point out a few of the good psychiatric things that were done in the Army, the Navy and the AAF, and also a few that were not so good. But, *remember always*, it was necessary for psychiatry to function in a weakened condition resulting from serious and dangerous deprivations of the vitamins of sufficient personnel. The good things that were done were accomplished in spite of the personnel malnutrition. The failures were the inevitable result of it.

Some of the finest achievements were equally contributed to by the Army, the Navy and the Air Forces, notably the valiant and successful effort to train more men for psychiatry; the formulation of a more dynamic nomenclature and the excellent record in regard to actual psychoses, the Navy having one psychotic per 1000 men; the Army not many more and the Air Forces practically

none, with between 65 and 70 per cent returned to their homes free of symptoms in an average treatment time of three months.

Not through their own fault but nevertheless the psychiatry of all three branches of the service shared in common a serious and morale-disruptive omission, the absence of any psychiatric evaluation of line officers. Not only did this endanger morale during the war, but it is the chief source of considerable dissatisfaction and anti-social attitudes among our veterans.

I would be remiss if I did not mention that amazing inner conflict between the medical departments of the Army and the Army Air Forces. I will say nothing of its merits but it did not help psychiatric effectiveness and it must never happen again.

The psychiatry of the Army should be highly commended for its splendid organization in the office of the Surgeon-General, including a constructive morale branch, for the effective work of the divisional psychiatrists, for the fruitful efforts in prevention by the mental hygiene units, the work of which fixed for all time the inseparable triad of psychiatrist, psychologist, and psychiatric social worker, for the generally-speaking good hospital service, particularly in E. T. O. and for the satisfactory treatment of NP. casualties in combat areas.

On the liability side the psychiatry of the Army was somewhat deceived by induction. Probably it expected too much from it and actually it got less than it expected. Neither can I be enthusiastic about the so-called convalescent hospital plan. It was nobly conceived but I think it miscarried. There was confusion as to whether the rehabilitation was to be a return to duty or a fitting for civilian life. It would have been more satisfactory if the concentration had been on the latter, since the return to duty that "stuck" was minimal. Perhaps they could not help it but in large measure the psychiatrists of the Army succumbed to the wiles of the line and gave an alarmingly large number of psychoneurotic medical discharges to many men who were merely militarily ineffective and should have been separated from the service administratively.

The neuro-psychiatric department of the Navy effectively secured and held the strong support and cooperation of its Surgeon-General who did not hesitate to cut through inhibiting regulations wherever possible. A notable achievement of the psychiatry of the Navy, involving clear vision, was its attitude of agnosticism and, indeed practically psychiatric atheism, concerning the effectiveness of induction. Being of little faith the psychiatric department of the Navy subscribed to the method of trial by duty and in its boot camps, it separated from the service, for NP. reasons 91,563 men. If this had not been done, in other words, if this large number of hospital beds had not been vacated before they were occupied, the second outstanding achievement, that is the care of certain psychoneurotic and psychosomatic patients in the wards of general naval hospitals, would not have been possible. It was not an easy task and sometimes heavy cruisers of determination and influence had to be brought into the battle. But the line was held. Thus was strengthened what is now a well recognized principle of civilian psychiatry, that a certain segment of NP., if it needs hospital care should be handled in the wards of general hospitals. At a recent meeting of the Advisory Council in Psychiatry of the VA, a resolution was passed to the effect that 30 percent of a general hospital population should be NP. It should be recorded, too, that the psychiatric department of the Navy showed a commendable pioneering spirit in the matters of group therapies and audio-visual aids in therapy.

There were many things on the debit side—the policy of stupid rigidity concerning physical examination standards for doctors, including psychiatrists, deprived the Navy of many good men. Many of the fine young men who became flight-surgeons in the Navy learned sadly enough that it was a flight away from medicine and surgery. They were given no opportunity to serve in hospitals and their medical knowledge was belittled and restricted to the treatment of minor casualties on the airfields.

The Army Air Forces with a handful of psychiatrists who fortunately were extremely able men handed in an enviable record. Among many good things, I think particularly of the training program which though too short was still a beautiful example of timing and coordination in the teaching of embryonic psychiatrists and psychiatric social workers. The dynamic treatment of NP. casualties in the flying personnel added a worth-while page to the therapy of psychiatry. At its best the rehabilitation program was the finest, most concentrated and most effective I have ever seen.

On the liability side, the psychiatry of the Air Forces in the matter of selection of flying personnel, perhaps because it had to, trusted far too much to the magic of tests. At least we have learned that psychologists, however skillful they may be in predicting the technical flying ability of a candidate have no crystal ball powers in foreseeing his combat flying ability which is the thing that counts in war. Not through the fault of the Air Forces psychiatrists, the flight surgeons were at best inadequately prepared to treat anxiety reactions in flying personnel in the theatres of combat. Perhaps the effort was not strong and hard enough, yet there was not success, or not much, in altering the line's point of view as to how inaptitude in combat flying should be dealt with, nor was any impression made on the granite-like attitude of the line concerning the thousands of young flyers and other combat personnel, who were excess and who were permitted to deteriorate in their morale rather than sensibly returning them to the reserve until they might be needed.

It is to be earnestly hoped that we will not forget the psychiatric experiences and the achievements of the military psychiatrists of this war as we did those of the last war. In a sense, whether we forget or not will be determined by the energy and determination of this Association. Unless we

are ever vigilant, insistent and even reiterative, then, among other things, the Surgeon-Generals of our great services, will continue to be denied their proper places in the planning councils of the General Staff, not even a skeleton of psychiatric organization will be retained and, if there is a World War III, the powers that be, will be amazed to learn, as they were at the beginning of this war, that there is an official account of the psychiatry of the war. It is to be earnestly hoped that at long last we will learn that those who do not heed the lessons of history are condemned to repeat them.

You have heard the splendid paper by Dr. Felix. During the war the department of psychiatry of the U. S. P. H. S. did not stand on the sidelines but it gave material aid. The Public Health Service did more than that, it studied carefully the psychiatry of the war. It was justifiably alarmed at the tremendous size of the problem. It noted adequacies and inadequacies; achievements and failures.

From its deliberations it has formulated a far-seeing and much needed program of psychiatry as a public health problem. It seems to me this program takes account of all our needs—the training of psychiatrists, and adjunct personnel; the indoctrination of general medical men with a much needed psychiatric point of view, the elevation of psychiatric teaching of the medical student to a higher and more effective level, the filling in of the large hiatus in the proper out-patient care of the nervously and mentally sick of the country, much needed help to hospitals and other institutions, public education and a challenging bid for true research. The Public Health Service goes into this battle for psychiatry with a record of notable achievements in the past including a shifting of tuberculosis as a cause of death from the first to the thirteenth place.

PSYCHIATRIC CASUALTIES IN SUBMARINE WARFARE[1]

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Although reports from the general services dealing with psychiatric casualties in World War II are numerous, as far as is known, a comprehensive study of psychiatric casualties occurring aboard submarines while on war patrols has not been made. As complete a review of this subject as possible is proposed in this paper.

In World War II approximately 1,520 war patrols were completed by United States submarines. Of this number, 1,042 were officially designated as having been "successful" and 478 as "unsuccessful" in the completion of their missions. At the completion of a cruise, commanding officers submitted an official patrol report, one section of which dealt with the health of the crew. Some 1,489 reports were available for study (21 reports classified as SECRET or TOP SECRET were inaccessible; it is definitely known that there were five patrols for which no reports are in existence). In order to evaluate the psychiatric casualties which occurred, these available reports were carefully read and all applicable remarks found therein were carefully tabulated. Admittedly and for various reasons, the patrol reports were sometimes incomplete. It should be pointed out, moreover, that the diagnoses of psychiatric casualties were made in the first instance by lay personnel, normally the pharmacist's mate or the commanding officer. However, insofar as concerns the data in which we are interested there exists no other comparable source of information.

HAZARDS OF SUBMARINE WARFARE

There can be no doubt that the traumata sometimes experienced by personnel in the submarine service were as great, if not in excess, of those experienced by any other group in the war. Allied submarines enroute to and from their area of operations could not claim immunity from attack by "friendly planes." While patrolling enemy-held waters they were "lone wolves," subject to vicious attack when sighted by enemy air and surface antisubmarine units. The depth charge was *the* Japanese antisubmarine weapon. With every attack the officers and men could not help but wonder when the next aerial bomb or depth charge would make a direct hit. They all knew that submarines were being lost to enemy counterattacks. While being hunted, unable to fight back, the submerged submarine "ran silent." All men except those necessary to control the ship were in their bunks. Those up and about removed their shoes. Talking and unnecessary noise were kept at a minimum. With all ventilation, air conditioning and refrigeration units secured, the interior of the boats became excessively hot and humid. The enforced inactivity and helplessness of their situation and the actual trauma of the exploding depth charges were enough at times to terrify the bravest of men.

Other encountered hazards, such as the continual harassment of enemy radar-equipped night planes, floating mines, shallow water operations, air-sea rescue operations, etc., could not help but impose severe emotional strain. If we add to these the strain of reconnaissance operations, mine laying and fruitless days of patrolling without enemy contacts, the stamina required of individual men and the very high caliber of leadership demanded of the commanding officers became apparent. In spite of the great responsibilities vested in commanding officers, there is patrol report evidence of only four cases in which the men apparently lost confidence in their commanding officers, or the commanding officer lost confidence in himself, or his boat.

The following excerpts from patrol reports vividly illustrate the type of emotional trauma sometimes encountered:

A terrific explosion jarred the boat. All hands not holding on to something were knocked from their feet. At 300 feet: "Fire in the maneuvering room, all power lost." Thick toxic smoke filled the maneuvering room and after topedo rooms. All hands

[1] The authors wish to express their appreciation to Pharmacist C. F. Vaught, U.S.N. for his invaluable assistance in the abstract of the Submarine Patrol Report.

aft were sick. We went up and down three times and had started down the fourth time before power was regained. In the maneuvering room the situation was bad. All hands were violently ill.

As described in another patrol report:

For the first two hours we were in a mighty tough spot. Extreme discomfort was suffered from the accumulated heat and humidity. All hands stripped down to shorts and the men took off their shoes and socks. . . . . The predicament of the ship was a fact fully recognized by the older and more experienced men. As the youngsters folded up, the others took over. The most startling effect was the apathy engendered by the combination of heat, pressure, physical effort and mental stress. Some without permission, others after requesting relief, would seek the closest clear space on the deck, lie down, and fall asleep. Most stations ended up with two men taking turns, relieving one another when necessary, the off-watch resting on the deck beside his station.

Other reports vividly portray the tense situation:

Men quickly shed their shoes without orders on the first and last attack. While things were quiet overhead it was noticed that flashlights, wrenches and valves were moved with the greatest of caution and stealth and the movement of all hands was done with forethought and deliberation. Conversation was unconsciously carried on in whispers when there was a lull in an attack and it looked as though we were getting clear.

The most discouraging moment of the patrol was the realization that these fellows returning seemed to eliminate practically all doubt that they were looking for us with a pretty good idea where we were. We felt as though we were surrounded by a thorough radar network about whose existence we could do nothing and whose multiplicity made analysis very sketchy and uncertain.

Kamikaze drew off and commenced a deliberate and systematic search and approach and passed directly over the conning tower. The roar of his screws heard through the hull was a sound none of us will ever forget. We held our breaths but nothing happened. (Eighteen minutes later) He passed directly overhead the second time. Again nothing happened. We cannot understand it—we can hear him pinging even through the hull; he certainly has spotted us. Issued brandy to all hands—a great morale booster and nerve steadier.

They started going off six minutes after firing and there were only eight charges dropped but the next hour was the most harrowing of my experience. . . . . There were two sets of screws, one fast and one slow. They would ping and listen. I tried to put them astern; only to have him make a run across to our other bow, passing ahead or directly over. They stayed one on either bow most of the time and would turn and make their runs one to the other side. And all of this was carried on in the utmost silence. Not a charge was dropped after the first two minute barrage. It is impossible to describe the tension attached to listening for the charges when you know the scoundrel is in good dropping position and does not drop. I found myself wishing that some charges would be dropped so that we might speed in on the occasion and get away.

The boat was absolutely quiet and though no one removed their shoes, people walked on tip-toe and talked in whispers. Drawing a glass of water from the wardroom spigot sounded like Niagara Falls. Heard a loud clanking noise as if a chain was being hauled across the boat. This made a terrific clatter lasting several seconds. Either they were dragging across us or the bridge was falling off. No attack developed after this so we sat tight.

Encountered Psychiatric Casualties

The following brief résumés indicate in general the types of psychiatric casualties encountered and described on submarine war patrols as a result of the conditions peculiar to submarine warfare just described. Each quotation represents an episode on an individual submarine on patrol unless otherwise noted.

The general manifestations evidenced by men under the stress of the psychic trauma and the physical strain of repairing material casualties in excessive heat, humidity and pressure are described as excessive physical weariness with headaches, lethargy, and sometimes heat exhaustion. General sequelae sometimes observed after such experiences were described as follows:

It was noted that within a period of 24 hours following the depth charge attack, several cases of mild gastric disturbance consisting of slight nausea and cramp-like feeling developed; rapid recovery without treatment followed.

It is interesting to note that approximately one-half the crew complained of headaches, slight diarrhea and acidosis for three or four days following the depth charge attack.

Notation of generalized impairment of appetite for a period of eighteen hours or so following a severe depth charging attack was made by another commanding officer. Some individuals manifested gastric symptoms to the exclusion of others, as, for instance:

One petty officer, making his first patrol, suffered attacks of acute nausea (vomiting blood) during the depth charge attack. These attacks continued for the next five days. He was extremely nervous

for the remainder of the patrol, and will be transferred upon arrival in port and temperamentally disqualified for submarine duty.

And,

One man during depth charge attack became very nervous and nauseated.

And again:

One man has been extremely nervous during this run. Has been complaining of almost constant headaches, dizziness, spots before the eyes, gripping pains in the stomach, all of which certainly are a product of the mind.

There were numerous headaches among the crew —found to be primarily among men with a large number of patrols to their credit and with a great deal of time aboard submarines.

Upon occasion men experienced symptoms of strain before reaching the area of combat:

One enlisted man suffered from nervous strain prior to arrival on station. Settled down and performed well throughout remainder of patrol.

One chief petty officer suffered from nervous strain prior to arrival on station. Recovered sufficiently well to perform all duties capably while on station. Will be transferred to the relief crew for proper rest period upon arrival in port.

More commonly, however, acute manifestations of strain were seen during or immediately after enemy counter-attacks:

One chief petty officer definitely cracked under the strain of too much bombing, depth charging and deep diving. He was unable to eat or sleep for a period of four days. Codeine produced no effect and as a last resort morphine was used. He had a very bad influence on the rest of the crew throughout the patrol and could not be trusted to man his regularly assigned station without supervision.

Only one man on his first patrol showed obvious signs of being temperamentally unsuited for submarine duty. He became extremely nervous and overwrought during a heavy depth charge attack. The fact that this man had suffered a severe injury of his finger earlier in the patrol may have been a contributing factor.

Sometimes as observed, the acute symptoms subsided, allowing the individual to carry out his duties with varying degrees of impairment or none at all. In other instances symptoms recurred (sometimes with successive enemy counter-attacks) or persisted throughout the patrol, making it necessary to remove the man from the watch list.

After the severe bombing attack.... two men suffered psychoneuroses and were extremely nervous the remainder of the run. Both men are being disqualified from submarines.

As illustration of the multiple complicating factors which render a diagnosis difficult, this report further states:

Three other men suffered heat exhaustion on the same night during the four hour dive without the ventilation system running.

Other excerpts illustrating the sometimes incapacitating effects of these experiences are as follows:

A forty-five year old chief radioman with previous "S" boat experience (war patrol) suffered from nervous exhaustion following the bombing. He continued on duty, insisting he was all right as soon as we received a message telling us when to terminate the patrol. Three weeks after the bombing he collapsed on watch and later recovered sufficient strength to return to the watch list. The crew's nervous tension relaxed after 28 December 1944. We had attacked an air and surface escorted convoy and escaped without being detected by either planes or surface escorts. Confidence had returned.

And,

Two officers were unnerved to the point of being unreliable in their performance of duty, and were setting a bad example for the crew. This was the eighth patrol for one officer and the first for the other. Only two enlisted men became obviously unreliable in their performance of duty.

Two key men .... so nearly approached complete nervous and physical collapse that it was necessary to place them on the sick list relieved of all duties. One of these was in charge of an operation that nearly wrecked No. 4 torpedo tube .... one of two serious casualties resulting from what, in normal times, could only be called sheer stupidity.

These acute symptoms were sometimes seen in men making their first patrol, on occasion before the submarine reached its area; others were manifested by men who had had previous combat experience or who made successive war patrols.

One soundman second class, the battle station bow planesman, was unable to undergo the mental strain of depth charging or explosions of any nature. This was his second offensive patrol, the first having been made on this boat. This man appeared jittery at times on his first patrol, but went to pieces completely on the second. He was treated by the pharmacist's mate..... At all times when danger was not immediately apparent, his performance of duty was satisfactory. He was transferred to the relief crew of an advance base.

The man responsible for this error (serious material casualty) has made four patrols on this ship and is an experienced and reliable petty officer; he is, however, showing strong tendencies toward nervousness and will be left in this time for a rest.

And,

An electrician's mate who had been given a rest period of eight months in the relief crew was taken aboard, but unfortunately this did not cure him of excessive nervousness when under enemy counter-attacks.

One man making his first patrol shows signs of excessive explosion shyness traceable, no doubt, to having been in a gun turret explosion aboard a cruiser earlier in the war. He will be better off elsewhere than on a submarine.

On occasion hysterical symptoms were reported in men under great strain. Early in the war one of our older submarines, on her first patrol, sank a Japanese cruiser. Concerning the immediate and severe depth-charging which the ship experienced, the commanding officer stated:

This was a new experience for us all, and I consider the behavior of the officers and crew, with one exception, to have been excellent. This one man got hysterical and had to be held down by others.

And again on another submarine:

Health was good with the exception of an attack suffered by a torpedoman second class who has made eight previous patrols. This man went into a coma for the better part of two days during which time he could neither talk nor understand what was being said to him. He would sit upright in his bunk for hours with all muscles tensed and during these periods had difficulty breathing. When he finally came out of it, the only explanation he could give was that he had had a bad dream.

During the first depth charging one man, who had previous war patrol experience in Asiatic station "S" boats broke down and later said that he had lost his nerve. On subsequent depth chargings this man proved unstable and broke down and cried on several occasions.

Two instances of partial facial paralyses were observed in these patrol reports, both of which were associated by the commanding officers with psychic strain. Concerning one of these episodes, it was stated:

A surprise night bombing on the fifth night in the area was a distinct shock to the crew. Much enemy night air activity necessitated frequent night dives. The attendant nervous tension coupled with prevalent rough seas interfered materially with the sound sleep of the crew. A 21-year old machinist's mate with no previous war patrol experience developed a partial paralysis of the left side of his face following the above bombing. He appeared otherwise normal.

There were five cases reported which were likely in the nature of frank psychoses. One of these occurred on an Aleutian patrol early in the war and was apparently the cause of considerable apprehension aboard the submarine, it being written:

One man suspected of being mentally unbalanced was put under close observation and removed from the watch. . . . . Our patient is definitely unbalanced and a menace to the safety of the ship. Confined to the ward room, guard posted.

It was necessary to recall the submarine from patrol nine days after she reached her area of operations to remove this patient.

Transfer of a second psychotic patient was made at sea, in enemy controlled waters, from one submarine to another in order that he might be returned for medical care. His management en route proved difficult and restraint was necessary. His obstreperous behavior demoralized every compartment in which he was confined.

A third case involving a pharmacist's mate was later hospitalized with a diagnosis of dementia præcox. The fourth case, a man who had many previous war patrols, committed suicide aboard the boat en route to the area of operations and was buried at sea.

The following information is available concerning the fifth psychotic episode:

During the close depth charge attack one man, a chief commissary steward, a veteran of patrols on other submarines, showed extreme nervousness and mental depression. Later he was caught in the act of apparently committing suicide by the pharmacist's mate who took an open knife from his hand as he attempted to slash it across his throat. Three other men witnessed this scene. Early in the patrol he was given small amounts of sodium amytal and elixir of phenobarbital to quiet his nerves. He kept bothering the pharmacist's mate for more after the depth charging. He reported aboard the day before we left for patrol. Found in his jacket was a recent request for his own disqualification for submarine duty. His presence aboard is a definite hazard to our morale and he will be temperamentally disqualified and transferred upon arrival for mental observation.

No mention of homosexual behavior occurs in these patrol reports. However, the authors know of nine cases, three of which were detected aboard combat submarines or

in men who had submarine duty. The remaining six men had had no experience aboard submarines.

Clinical Histories

The following case histories were taken by one of the authors from patients seen over a period of a year at an advanced submarine base, and are quoted for their interest:

One man stated that he had been perfectly content with his duty aboard the USS ——— on her first patrol—until the initial depth charges. In describing these he said: "My nerves seemed to give out; I shook all over; I couldn't keep my hands still and I stammered. I couldn't seem to breathe and sweated all over. When I would lie down black spots came in front of my eyes and it seemed like I was going to faint. I wanted to scream and wrapped my head in a pillow so I wouldn't. After that I lost my appetite and couldn't sleep. When I did get to sleep, I'd dream of terrible things and would awaken with a great start as though someone was calling me. . . . . The second attack we had was the same way. Now whenever the diving alarm sounds I start to shake all over. I wouldn't like to go out again unless I have to. I'm afraid that I couldn't take it the next time."

A second man had reported aboard the USS ——— as an emergency replacement. At the conclusion of this patrol, his first, of some 63 days length, he was put ashore for administrative reasons. Two weeks later he appeared requesting: "I want to be disqualified from submarine duty because my nerves can't take it." On this particular patrol the ship had received severe and prolonged depth charges. "The first depth charges weren't so bad; I was scared, sure, everybody was scared, but I thought they had gone. Then when they came back for the second time I was stunned beyond the point of being scared; I couldn't move, sleep, or think. I felt anxious, weak, and jittery. I don't want to make no more runs. I don't think that I can take it."

A third man had returned from a long and arduous patrol, the first part of which had passed without incident following which he described the gradual onset of fatigue and nervousness. On one occasion, while standing lookout, in severe storm, "The ship took a fifty degree roll, staying in that position for at least a minute. I was wedged in on the bridge; the seas were mountainous and passing over me. I was looking down straight into the ocean, the waves breaking over my head. The hatch was open but I couldn't possibly get down. I had given up all hopes for us but finally the ship righted itself. I was very scared and couldn't get over it. Then I thought I had but it wasn't so and each time upon the bridge, in a storm, I was frightened. When we arrived here I felt that it would be all right. The recuperation period went well. On our first trial run, yesterday, I took several messages. I knew what was going on; I knew what they were as I took them but then I couldn't remember them. In emergencies I can't seem to think; I seem to be paralyzed. When we dive I'm afraid. I thought I could stick out the patrol but I can't go through with it. I feel afraid the minute I go below and I'm afraid that I'll do something that will endanger everyone."

On one occasion a pharmacist's mate brought a patient from a submarine enroute to its area of operation to the dispensary at an advanced base. The patient's chief complaint was abdominal pain. After examination, it was decided that his difficulties were likely due to chronic constipation. Note was made of the presence of many tattoos, there being scarcely a square inch of skin which was not covered with some design or another. He had been a tattoo artist in civilian life. No notice was made of constriction of the pupils which surely must have been present. Some two weeks after the submarine had departed he confessed being a morphine addict upon apprehension at attempted theft of the submarine's supply of the drug. The subsequent withdrawal symptoms proved difficult to manage and were most intense at a time when his services were badly needed as a radar technician.

Statistical Analysis

All of the cases described in the patrol reports which could possibly be diagnosed as neuropsychiatric or emotional casualties are presented in the following table:

Diseases of the Mind and Nervous System

Classes XV and XVII

Diagnosis *	No. of patrols reporting	No. of cases reported †
Psychoneurosis, anxiety ‡....	23	25
Psychoneurosis, hysteria.....	8	9
Psychoneurosis, unclassified..	6	6
Psychosis, unclassified.....	5	5
Neuritis, unclassified.....	6	6
Paralysis, unclassified.....	2	2
Paralysis, facial nerve.....	2	2
Epilepsy	2	2
Migraine	2	2
Diagnosis undetermined— (Syncope)	2	2
Diagnosis undetermined— (Vertigo)	1	1
	59	62

* U. S. Navy Medical Department Nomenclature—1945.
† Classified as nearly as possible from sometimes inadequate case histories obtainable from patrol reports.
‡ It has been pointed out that diagnosis (psychoneurosis, anxiety) is too infrequent, and that a trained and emotionally neutral observer during any depth charge attack would almost certainly detect true symptoms in many of the crew. However, perhaps some slight disturbance was considered to be a reasonable and normal reaction to the situation. At any rate it is apparent that only those reactions interfering with performance of duty were recorded. "The depth charge attacks had little effect on personnel. They came to be expected and accepted as routine and to all appearances were ignored. The experience of the heavy grapnel banging against the ship's hull when deep caused some raised eyebrows, the commanding officer's being as high as any."

To evaluate the true significance of this total of 56 possible psychiatric casualties (neuritis not included), it is necessary to have information concerning the number of men exposed to the emotional trauma so vividly described in the patrol reports and so indelibly recorded in the memory of all submariners.

There were, as noted earlier, 1520 war patrols (all areas) and there was an approximate average of 75 enlisted men aboard on each patrol, making a grand total of 114,000 man-patrols. There were 12,160 officer-patrols. Human nature being what it is, officers were as prone to "break" as the men, and perhaps more so, because they more fully realized the dangers and responsibilities.

This total of 126,160 man-patrols and 56 possible psychiatric casualties give the amazing percentage of .00044 casualty cases of a psychiatric nature occurring per man-patrol.

Another method of approach is to take the average number of patrols made per submariner. From the thousands of questionnaires returned after the war in connection with a survey which was conducted on submarine personnel, a random sample of 318 returns was tabulated. The maximum number of patrols made by one man was 14 in this group and the average number was 6.17 patrols per man. Thus, if we divide the man-patrols (126,160) by the average patrol per man (6.17) we have 20,447 men making an average of 6.17 patrols. Again, 56 cases is an amazingly low figure. One report states:

> It is interesting to note that during the six war patrols made to date and in spite of the severe depth charging on each patrol involving a total of over 500 depth charges, only one man has cracked up. This was on the first patrol and the man was a veteran of several war patrols on another vessel.

To approach the problem in another way: the maximum number of men attached to submarines, relief crews, rest camps, and administrative staffs, never exceeded 25,433 individuals. Even if we made the erroneous assumption that these were the only men attached to the Submarine Service throughout the war, we would have an admission rate of only 2.2 per thousand.

Though these figures may be somewhat incomplete and underestimated, nevertheless it must be obvious that the Submarine Service had a very enviable record so far as emotional or psychiatric breaks are concerned.

The reasons for this record are important, particularly in the light of planning for any future national emergency. The authors believe they may be completely summarized under the following general headings:

1. Selection of the candidates for the Submarine Service.
2. Training of submarine personnel.
3. Morale, or *esprit de corps,* of the Submarine Service.
4. Pre- and post-patrol physical examinations to determine fitness for continued duty aboard submarines.
5. Generous use of rest camps and rotation to the "States" for leave and to pick up "new construction" submarines.
6. Confidence in the submarines, their officers, and their shipmates.

1. *Selection.*—Foremost to be considered in a discussion of selection for the Submarine Service is the fact that every man is a *volunteer.* He may have been drafted into the Navy, but he goes into the submarine branch of his own free will. This not only is a selective process in itself, but also a motivating force for the man to remain associated with submarines.

Much has been written about the process of selection for the Submarine Service. Here we will be content to mention that all the men were required to meet the rigid educational, psychometric and psychiatric, as well as physical fitness standards. An attempt was made in the screening process to eliminate all those with obvious and latent defects, as indicated by the psychological and psychiatric evaluations. That only one case of dementia præcox and two cases of epilepsy were reported on submarines during the war indicates that the effectiveness of this screening was of an extremely high order. None of the other reasons—training, morale or rest could account for this.

2. *Training.*—Training was conducted in an exceptionally proficient manner by the Submarine School, which is an established activity of long standing and known excellence. "Refresher" training and "New Con-

struction" training courses were also conducted in order to keep both officers and men up to standard. A man who is sufficiently trained and drilled in his job has a maximum of confidence in himself and is most likely to withstand the trauma and rigors of warfare. He knows what to do and how and when to do it, and reacts automatically in times of emergency.

3. *Morale.*—There is no question but that from start to finish the Submarine Service engenders in men special spirit which undoubtedly served to carry them over many a tough spot. They realized fully that they were a part of an organization with a reputation to live up to and of which they could be proud. They lived together as one family and they realized that if one man failed, all would fail in their mission. For this reason there was less likelihood that they would allow themselves to give way to the pressure of moment.

4. *Pre- and Post-Patrol Physical Examination for Continuance on Patrol.*—Pre- and post-patrol physical examinations undoubtedly served to detect men in need of a period of rest and rehabilitation, and thus forestalled many emotional "breaks."

5. *Rest Camps and Rotation.*—An important factor enabling the submarines to attain their excellent record was the generous use of rest camps and rotation of duty. It was a general policy that no man should make more than two consecutive patrols without spending a period of time in a rest camp. An equally important factor was occasional rotation to the United States to 'pick-up" a new boat. The incidental leave of course was an effective form of rehabilitation.

6. *Confidence in Submarines, Officers, and Shipmates.*—The construction of the submarine, its demonstrated ability to withstand enemy-counter attacks, and the demonstrated effectiveness of their weapons could not but engender confidence in all the men. In addition to this, they were well aware that both their officers and shipmates had not only been very carefully selected but highly trained, thus assuring the maximum in efficiency and mutual protection.

7. The lessons to be applied in the planning of any future conflict have been amply covered in this discussion of why the Submarine Service fared so well in contrast to other services insofar as psychiatric casualties are concerned. It is apparent that by selection, by training, by building morale, by frequent examinations, by generous use of rest camps, and by instilling confidence, the "breaking point" was indefinitely deferred and psychiatric casualties were largely eliminated under conditions which submarines encountered in World War II.

THE PARANOIAC OFFICER AND THE OFFICER PARANEE

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Between January 10, 1944, and April 1, 1945, over 14,000 patients were admitted to the 96th (US) General Hospital (NP), where the authors of this article were stationed. Most of these were psychiatric rather than neurologic casualties. Among them were eight officers who showed paranoiac reactions(1). All were responsible for the administrative supervision of enlisted or officer personnel. Two were lieutenant colonels, and both were in positions of command. In each patient, circumscribed, systematized and logically presented delusions of reference, insusceptible to logic and with retrospective falsification of memory, were present. With one exception, delusions of grandeur were minimal. No personality deterioration was evident. Rationalizations were plausible, but with the passage of time each patient showed an irresistible selection of environmental evidence in an attempt to involve more and more individuals in the conspiracy against him. Nevertheless, symptoms were milder than those which usually force paranoiacs in civilian life to submit to psychiatric care, and delusional systems were undoubtedly in a much earlier stage of development. As a result, under certain conditions these patients could be considered as obsessive-compulsive individuals with paranoiac personalities, as paranoiac-like reaction types, or as extremely early cases of paranoia vera in the Kraepelinian sense of the term. We believe that all eight were rigid and unyielding paranoiac personalities who, in the still more rigid and unyielding environment of the military situation, resorted to systematized but circumscribed paranoiac symptom formation, and in another paper hope to present detailed case histories in order to prove this thesis. This article, however, deals only with the paranoiac reaction *per se*, in order (a) to determine the effect on the individual paranoiac of influences peculiar to the military environment, (b) to learn how the paranoiac has affected subordinates and especially junior officers, and (c) to attain a better understanding of the underlying psychopathology of the disease so that proper consideration, necessarily *post facto*, may be given psychogenically traumatized subordinates.

It seems necessary at this point to stress the fact that we are here dealing with a small number of psychiatrically ill officers who aspired, in one sense or other, to the complete domination of all with whom they came in contact, and who as a result interpreted army regulations with complete disregard for their humane application. It seems necessary also to stress the additional fact that such individuals, with symptoms so comparatively mild and in so early a stage of their development, in civilian life would probably never have reached either physician or psychiatrist; but that in the Army, for reasons to be considered below, they were soon ordered into hospitals for psychiatric observation, and their demoralizing and psychogenically traumatizing careers for the most part were ended long before those of their civilian counterparts would ever have been recognized as abnormal. As General Menninger has rather informally stated, "The

[1] We feel deeply indebted to Lt. Col. Albert N. Whitman, Ord. Dept., and to the numerous other officers who helped make this study possible, but who for obvious reasons must remain anonymous. We owe a heavy debt of gratitude, for his helpful cooperation during one phase of this investigation, to Brigadier General Ewart G. Plank, USA, who at the time these studies were made was Commanding General, Advance Section, Communications Zone, European Theatre of Operations. In addition, we wish to thank both Dr. John C. Whitehorn and Brigadier General William C. Menninger, M. C., for their helpful suggestions and pertinent criticism of some of the points made in this article. All responsibility for statements made, and points of view expressed, is of course that of the authors.

paranoid person may cause tremendous disturbance in civilian life and he potentially can in the Army, but the Army system detects him(2)."

Numerous handicaps were encountered during the course of this investigation. All were due fundamentally to the fact that the disease itself consists essentially of systematized delusions, and nothing more. With our patients, these invariably took their origin in actual fact. No personality deterioration was evident. In cross-section, their behavior and associated thought content seemed normal. Their reasoning was brilliant, impeccable, unassailable. They considered themselves psychiatrically sound and rationalized plausibly enough to convince even psychiatrists that specific individuals in their more or less immediate environment, rather than they themselves, were to blame for their difficulties. They condemned, in no uncertain terms, all efforts to elicit their fundamental personality patterns, incorporated physicians in their delusional structure, and at times accused their medical officers of inefficiency in so convincing and logical a fashion as to handicap the investigation. Adequate reports of events leading to their hospitalization were seldom available, and that despite the fact that for purposes of diagnosis and disposition it seemed almost mandatory to make as close a study as possible of the patient's entire life history, something seldom feasible in military echelons where friction was mounting and morale falling as a result of the never-ending bickering and constant reproaches of the paranoiac.

The prime diagnostic hurdle was that posed by the differential from apparent normalcy. Even before being sent overseas, one lieutenant colonel was deprived of his command and hospitalized for psychiatric observation; nevertheless, he obtained psychiatric clearance and was ordered to the European Theatre of Operations. In four cases, a board of three psychiatrists concurred in our original paper-diagnosis of "no disease: administrative admission for determination of mental status." Well-trained psychiatrists, so it seems, could therefore far from infrequently be inveigled by these patients into the anomalous position of identifying themselves with the paranoiac and rationalizing excuses in his behalf.

Paranoiac patients are seldom seen in civilian practice. The disease, however, is probably far from rare(3, 4, 5), unless one measures its incidence in terms of the number of patients hospitalized or otherwise receiving psychiatric care, in which case it becomes one of the rarest of all mental diseases, and that for three different reasons. First, the paranoiac rationalizes so plausibly as to appear on cross-section as absolutely normal. As a result, he seldom reaches physician or psychiatrist, and when he does, he often deceives even them. Secondly, even if the disease be recognized, the proof of the diagnosis is so difficult, because of the supreme plausibility of the patient, that the physician often refuses to involve himself either in the potential suits that can be brought against him or in the legal difficulties that so frequently ensue. And thirdly, even if the disease be recognized and so diagnosed, the legal difficulties of commitment in certain states often make hospitalization for any length of time practically impossible: as a result Burr(6) complained that the due process of law clause, at least as interpreted in 1920 in Minnesota, was "tantamount to declaring that an invalid is not entitled to medical attention in an organized institution for the insane until convicted of the crime of being ill."

Mild and at times even severe paranoiacs comprise some of the cranks and crack-pots of civilian communities. Their nuisance value is high. They usually find themselves in legal difficulties with their environment. Many show insufficient legal evidence of anti-social behavior to necessitate medical or custodial care. If definite action be taken, by attempting for instance to commit them to psychiatric hospitals, habeas corpus proceedings more than likely secure their release. They are free to move about as they will in the community, and they may therefore possibly attain to opportunities for the satisfaction of their megalomanic drives. If their ideas are not accepted by the rest of the community, they can move elsewhere, and may eventually gravitate to capitals of states or countries in an attempt to obtain recognition they consider their due.

In the Army, however, the story may be different. Army regulations demand strict compliance. Our patients, for instance, were

all intelligent compulsive-obsessional individuals, efficient, precise, exact and meticulous beyond the bounds of common sense, who interpreted orders and carried them out in their most minute and hair-splitting details. Their obvious intelligence and meticulous compliance with army regulations resulted in premature promotions until positions of authority over other officers were reached. Then they insisted on the immediate, precise and detailed execution of regulations as they alone interpreted them. Aspirations for the more and more complete domination of their subordinates gradually culminated in the making of demands that no subordinates could possibly fulfill. The psychasthenic over-zealousness upon which they insisted in the performance of even trifling tasks ultimately resulted in friction within their units. Subordinate officers became demoralized. As a result, our patients considered fellow officers envious, jealous and hostile; remained uncompromising, inflexible and unadaptable; were incapable of making even the most minor of concessions; became hypersensitive to the mildest of criticism; and found it impossible to accept suggestions, let alone the discipline inevitably and ultimately imposed by the Army on even its highest ranking personnel.

In each case, their unjust criticism and inability to adjust seemed proof presumptive that their advancement had been preceded by far from mature deliberation. In no case was this acknowledged, nor were any of these patients in the beginning called before army reclassification boards or recommended for psychiatric re-evaluation. Instead, most were transferred to other units where new subordinates and fellow officers were in turn exposed to the same demoralizing influence. One patient was transferred on three separate occasions within a 14-week period. Most received repeated transfers from post to post until ultimately some officer in a position of authority, realizing the true state of affairs, took the necessary measures that resulted in their hospitalizations.

The greater the authority attained, the more obvious the detrimental influence which they exerted on their subordinates. Army regulations can provide material for the unreasonable enforcement of a paranoiac's ukase. Blind obedience was expected and demanded. All eight patients played the rôle of petty tyrant. One was a chief nurse who decided policy, determined transfers, allowed leaves and meted out punishment. Another was the commanding officer of a hospital unit. Because of his rank, obedience was enforced: charges could so easily be pressed and boards so readily convened. Of the line officers, one was a lieutenant, one a captain, and one a lieutenant colonel. How many enlisted men were driven into going "over the hill" or "blowing their tops," and perhaps being court-martialed or demoted, it seems impossible even to hazard a guess. The demands made by our patients were unreasonable and compliance impossible. Friction mounted rapidly within their units. Rebellion to unreasonable demands rose close to the surface. Our patients projected the source of their difficulties on subordinate officers. Each untoward event, no matter how slight, they misinterpreted in the light of purposeful and hostile discrimination. They continually examined and re-examined memories of past events and ultimately fitted them, like the elements of a jig-saw puzzle, into the framework of apparent present persecution. Insight was never present. The situation gradually grew worse. Ultimately, as in most of our cases, subordinates became bold enough to complain to higher authority (including the Inspector General), or as in one case the patient himself in a convincing way registered with higher command the insubordination of his junior officers. The problem was recognized for what it was and our paranoiac patients ordered into hospitals for psychiatric observation, six of them because their efficiency, over-meticulous beyond the exercise of common sense, had created sufficiently pronounced friction and discontent within their commands to constitute a definite morale problem.

But hospitalization alone was no solution. Detailed and adequate reports of the events which necessitated their hospitalization were seldom available, yet such reports were a *sine qua non* for diagnosis and adequate disposition. Superficially, the behavior of these patients seemed usual, rational and to be expected. Their personalities had evolved, in

their own warped fashion, "developing and unfolding in the same way the normal mind does in the normal individual"(4). They showed errors and eccentricities, but the origin of these nevertheless seemed common to the daily experience of most of us(3). Paranoia in fact has at times been described as though it were a personality type rather than a disease entity. In the absence of detailed and adequate pre-hospitalization histories and even after comparatively prolonged psychiatric observation, these patients, seemed merely rigid, peculiar and exceedingly meticulous conscientious officers, rather than individuals psychiatrically ill. Formulation of the problem was impossible. Our first impulse was to return each and every one of these patients to duty. And all had been so disposed of at one hospital or other before finally reaching us.

Medical "exoneration" of this type merely intensified the symptoms. On later rehospitalization, additional details would come to light. Nevertheless, those responsible for making the final decision for obvious reasons were frequently unwilling to label the disease. For this reason, as well as in some cases because of lack of sufficient information at the time for the making of the diagnosis, only two of our eight patients were actually labelled paranoia vera. The others were diagnosed variously as (a) "reactive depression," (b) "psychopathic personality, emotional instability," (c) "psychopathic personality, paranoid behavior," or (d) "arteriosclerosis with cerebral focalization" (a face saving diagnosis made in the case of the medical officer). And two were discharged to duty as "administrative admissions: no disease."

To recapitulate, the mere fact that such patients were hospitalized for psychiatric observation proved insufficient for correct formulation of the problem and adequate disposition of the patient in the absence of full and complete reports of the events leading to hospitalization. But even then, after the diagnosis had been made, medical installations further to the rear in two cases re-labelled the patient "no disease," returned him to duty, and made possible a repetition of the events listed above.

In the meantime, while these patients were still on duty and before adequate disposition could be made, their subordinate officers were being detrimentally influenced by their paranoiac attitudes. Objectively, this manifested itself most commonly in decreased efficiency on their part and in unfairly low efficiency ratings as reflected in the reports which our higher ranking patients were required by army regulations to enter after specific periods of time on the personnel records of their subordinates. Since assignments and promotions are—or may be—made on the basis of such ratings, it can readily be seen that these helped determine the entire subsequent military careers of the officers in question.

Tracing subordinate officers and evaluating their efficiency under different commanders would be difficult enough in time of peace. This study was made while we were at war. The former subordinates of one of the two lieutenant colonels were traced and the necessary material collated from questionnaires distributed with the help and cooperation of a commanding general who recognized the value of obtaining such information. The former subordinates of a paranoid psychopath, a captain, were also contacted as a result of the exceedingly helpful cooperation of a lieutenant colonel who was interested in having the company become, as it soon did, "a strong, well run unit, capable of performing its prime mission in an efficient manner with high morale."

Both patients were readily angered. Both humiliated their junior officers before enlisted men. Both caused constant confusion by frequent change of policy. Both claimed that their difficulties were due primarily to the fact that their subordinate officers lacked the necessary knowledge of how to handle the men under their command. As a result, neither delegated any responsibility or authority to his junior officers.

The same complaints were made about both. "His lust for power just grew and grew," one officer complained. "He'd call me down in no uncertain terms in front of my men," cried another. "He'd tell the men to do something in a different way than the way I had just told them to do it. But if I would ask a question so he could clarify his command, he'd yell at me, 'Don't be so god-damned dumb!' That was his usual answer, especially if an enlisted man was

around." Most important of all, however, as one man complained, "He never gives precise orders, but he seems to have a detailed scheme in mind. You can never find out precisely what it is. He bawls you out all the time for not carrying out orders in the exact and precise and detailed way he wants them carried out, although you can never find out in advance exactly how he wants things done." However, to give the devil his due, "He likes to attend to details. *He can do a good job, if it's paper work without any men under him.* He should be at an HQ. Anything he does, he does well. He knows what he wants done himself and how he wants it done, but can't give orders that way. So we were always in the wrong."

Brickner(7, 8) draws a parallel between paranoiac behavior and the cultural attitudes of a paranoiac nation, so-called, like that of Nazi Germany. Two of his junior officers castigated the paranoid psychopath in no uncertain terms. "He wasn't democratic," they explained. "He was a bad loser. And he was against the Jews. If any Jew came into the company, he never stopped till he got rid of him. He got rid of all but four enlisted men who are left there now. He would never promote any Jewish officer or give him a fair rating. And he told us [the non-Jewish officers] that that was the reason."

However, so far as subordinate officers were concerned, there was at least one significant difference between the paranoid psychopath and the actual paranoiac: the psychopath, so his non-Jewish officers believed, rated them fairly, although under him they were unable to work as efficiently as under other commanding officers. The paranoiac, on the other hand, gave unfair efficiency ratings, and his officers ultimately complained about these.

Fault finding is common in the Army. Complaints of individual injustice are to be heard in almost every hut and tent. The letting-off of steam in this way is even encouraged. It therefore becomes necessary to check on the validity of the complaints made. Their subordinates were given lower efficiency ratings by these two patients than by other rating officers. According to one of the answers received (about the paranoiac), "approximately two to four weeks before the semi-annual rating was to be recorded Colonel X was transferred to a different command. Before his transfer he rated all officers. Due to a mix-up in the orders, Colonel X's orders were rescinded and he resumed command of the —st. Approximately two weeks later, at the regular time for recording the ratings, he arbitrarily nullified the rating made two weeks ago before and gave each officer a rating one grade lower than the previous rating without any apparent cause or reason."

So far as the psychopath was concerned, according to the inspecting officer his junior officers "showed a lack of confidence that could mean one of two things, either weak officers or a one-man unit. They were assigned to operations and a check was made to find out if they were capable. In all cases where they were given a definite assignment and allowed to use their own judgment, they proved to be as capable as the average company grade officer. . . . . At the present time [now that the paranoid psychopath had been removed from the unit], the company is a strong, well run unit." One subordinate officer stated, "I had no responsibility given me —and if I did, it wasn't put right." Another explained, "He deprived me of every bit of initiative. At the least little thing, I'd have to seek him out to learn how he wanted things done. I couldn't possibly function as well under him as I could under other C.O.'s, even under those two who were relieved for inefficiency." This last officer was a tense and hyperactive syntonic with pronounced drive who had finally adopted the attitude of "The hell with it! I'm just going to coast along!" Another syntonic, who was depressed, characterized his attitude somewhat differently. "It's like a dog," so he explained, "If you kick him around a lot! I got so, I just didn't give a damn any more!" This was in marked contrast to a third, somewhat schizoid officer who was constantly fretting and worrying about his inability to perform his duties in an acceptable manner, and who was badly in need of the self-confidence he regained some time after the removal of the psychopath from his command.

Discussion

The aggressive behavior of the paranoiac takes place in a socially shared field. Unlike the manic reaction, which is limited to the patient himself, or the schizoid one, which constitutes *per se* a withdrawal from others, the paranoiac process by definition must be one of active social and aggressive relationship. It demands a victim, the paranee as Brickner terms him(7):

Each of our eight patients continually trained the spot-light of purposely hostile discrimination on all objects and individuals with whom he came in contact. Rational criticism became impossible. Each constantly re-examined past events and gradually fitted them, like the component part of a mosaic, into the frame-work of present persecution: their subordinate officers, so they seemed convinced, were conspiring against, persecuting or otherwise discriminating against them. As Cameron states, each paranoiac "organizes a functionally interrelated environment of which he is the focal point. Its pattern develops from his sensitivities and the accidental character of the corroborative detail he finds around him"(9). He therefore creates an expanding field of delusion while operating in a social field with validity only in his own individualistic thinking. Paranoia itself becomes an entity with meaning only if considered on the basis of the complex system of interrelationships existing between the individual and the social group, in this case the army unit.

This interrelationship is a dual one. Each of these patients seemed superficially either the object of deliberate persecution or the victim of blind circumstance. Each was plagued with inefficient subordinates in whom he could place no trust, to whom therefore he could delegate little or no responsibility, and by whom as a result he was hated and given no cooperation whatsoever. Each suffered, and suffered constantly, through no fault of his own. Each seemed himself the victim. On close examination, however, in each case this proved to be pure rationalization. It was certainly not their junior officers who persecuted these patients; rather, it was the patients themselves who robbed their subordinates of self-respect, pride in accomplishment and ability to function efficiently, thereby demoralizing their units and making it impossible for them to perform their prime function.

Another of our patients was a nurse who had indulged in constant litigious behavior long before she entered military service. Her complaints were of mere secondary importance. Success intensifies paranoiac activity even more than failure. Neither individual paranoiacs, nor paranoiac cultures[2] like that of Nazi Germany, really desire a settlement of their grievances. Their one and only concept of legality is the Munich peace-in-our-time one of prohibition for others, concessions for themselves, and aggrandizement, aggrandizement and still further aggrandizement at the expense of every one else.

In other words, the *Weltanschauung* of the paranoiac is one of complete malevolence. "We behold that which we are," as Ruysbroeck so aptly epitomized it. The salient social relationship therefore is not the one alleged between patient and persecutor, but the one actually existent between patient and potential victim.

By projection, the paranoiac blames the paranee for his failure. By rationalization, he seeks the complete subjugation of the paranee and the concomitant establishment of his own supremacy(8). And unfortunately, his logic can be so plausible and his cries of victimization so convincing that he apparently proves his point, retains his status, and again becomes a member of society. Two of our patients have had their psychiatric diagnoses removed, and before the war had

[2] It would be the height of the ridiculous to imply that Axis aggression was primarily a psychiatric problem. As Zilboorg remarks, "wars and revolutions are sociological crises resulting from a number of deficiencies and mismanagement of human affairs(10)." Nevertheless, with Brickner(7, 8) we believe that the Nazi preoccupation with questions of superiority and inferiority, its cries of victimization with its retrospective falsification of history and its projection of all blame on specific national, racial and other minority groups can well be termed evidence of paranoid insecurity. Furthermore, as Brickner states, the cultural desiderata of Nazi Germany were first and foremost the very attitudes found elsewhere in paranoiac individuals. For this reason, we believe the simile underlying the term *paranoiac nation* a valid one, even though the basic problem is cultural and economic.

come to an end, they were once again assigned to duty.

Summary and Conclusions

1. The attitude of the paranoiac may be viewed as an outgrowth, on the part of the patient, of a defect in his machinery of social cooperation(9). His delusions are a direct expression of his effort nevertheless to attain an efficient adjustment. These express themselves in the fundamental social relationship that so inevitably characterizes paranoiac behavior: the relationship between the paranoiac and his victim, the paranee, which the patient rationalizes so beautifully into the delusion that the paranee is the actual persecutor.

2. During the course of this paper, an effort was made to indicate how paranoiac officers can detrimentally affect the careers of their subordinates who play the rôle of paranees. If an officer be relieved of his command because of mental disease, and particularly if he show evidence of paranoiac or paranoid disorder, we believe it the duty of the Army to investigate carefully his previous reports about junior officers, the boards he has convened and the charges he has pressed. We further believe, if the investigation shows that such reports and activities had been influenced by abnormal paranoid ideation, that the Army should delete all such deleterious reports and ratings from the 201 files and 66-1 cards on which they had been entered. In addition, we believe that as a preventive measure efficiency ratings should be made, not by a single commanding officer who under certain conditions may have had little or no contact with the officer so rated, but by three of the officers actually working with him including his immediate superior, and that the average of these three ratings should be the one to be entered on the 201 file of the officer in question.

3. This problem, however, is not specifically a military one. The psychoses of our patients seem somehow to have been precipitated by their sudden promotions to positions of authority. Hostile and perfectionistic individuals who drive their subordinates so ruthlessly are far from uncommon. The adjectives *paranoid* and *paranoiac* frequently connote pronounced and recognizable psychopathology, and as a result can scarcely be considered as descriptive of the type.[8] To translate apt but scarcely printable G.I. slang into Greek words like *proctophage* or *proctophagic* merely begs the question, since so far as we know the metaphor exists only in American English. Nevertheless, some term like *paranoiac,* if used to describe personalities such as these, seems needed.

4. Such individuals cannot readily be screened out of large organizations. They may be found both inside the Army and out of it. Since no hope exists for curing individual patients and since institutionalization by its very nature can account for only a small percentage of the actual number of paranoiacs at large within the community, Brickner has suggested that the recognition of paranoiac (or anti-democratic) behavior be taught in school so that we ultimately will be trained to recognize such behavior the moment it manifests itself, will not be duped into rationalizing excuses for the paranoiac, will not exert undoubted effort in his behalf, will not ourselves become paranees, and will not be misled by rabble-rousers who for purposes of their own claim victimization by specific racial, national or other minority groups while at the same time projecting upon such groups all blame for the social or economic insecurity which at the moment these same rabble-rousers are actually exploiting.

To us, it is not so much a paranoiac individual like our lieutenant colonel who is of chief importance, nor even a paranoiac culture, so-called, like that developed by the Axis countries and their sympathizers: it is above all else their actual and potential victims who warrant attention. In our opinion, the emphasis must be placed on the means which society can develop, within individual communities in the case of the psychiatric disease, within local communities as well as the world community in the case of

[8] On the other hand, the adjective *schizoid* denotes a constitutional type rather than an abnormal pattern of behavior. Numerous attempts have been made to delineate a *paranoiac personality type* along with the schizoid and the syntonic. The most ambitious of such attempts is probably the one by Montassut(11).

the sociological and political one, to protect itself collectively and individually, on the one hand from the aggrandizement of the paranoiac individual, and on the other from the equally menacing aggrandizement of those who deliberately attempt to exploit paranoiac attitudes.

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PRAGMATIC PSYCHOTHERAPY IN MILITARY TRAINING CENTERS [1]

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Any discussion as to the methods of psychotherapy is likely to produce considerable diversity of opinion. The therapeutic approach to a problem is usually determined by the situation, the patient, and the personality, training and individual convictions of the therapist. The essence of these remarks today is key-noted in the adjective "pragmatic" and limited to the circumscribed situation of the military training center.

This paper has a two-fold thesis. First, that hospitalization is far from an unmitigated blessing for the psychoneurotic in the army; and second, there are distinct opportunities for preventive psychiatry and therapeusis in the military structure, particularly in the training center.

Aggravation by Hospitalization

The possibility that hospitalization might constitute a severe additional psychic trauma in mentally ill individuals is not a new concept. From the author's five years' experience with psychoneuroses in the Army it is far more important than in civilian life, and plays a greater role than many seem prepared to accept. For example:

Private A: A 29-year-old colored male, who was admitted to the medical service 8 May 1941 with complaints of pain in knees and ankles. While under observation for arthritis he developed a marked forward flexion of the back with complaints of pain in the lumbar spine. Neuropsychiatric consultation disclosed a mentally deficient individual with a superimposed hysterical conversion, probably the result of anxiety over inability to cope with, to him, the inordinately complex military environment. This condition was progressing in the hospital with the development of a camptocormia. Under intravenous pentothal he relaxed completely. Immediate separation from the service was recommended.

Propitiously (as will appear) an unusually thorough exploration of the mental status was done during the early interviews and absolutely no psychotic disturbance was noted.

Because of x-ray findings of spur formation he was transferred to the orthopedic section for treatment of "hypertrophic arthritis of lumbar spine." He was placed in a whole-body spica, and later in a walking cast for two months. Upon removal there was slight but transient improvement and he was recommended for a disability discharge. While awaiting approval, he made an abortive suicidal attempt by drinking a mixture of azochloramide and tincture of benzoin, and was hastily transferred to the neuropsychiatric section. Investigation of his behavior on the orthopedic section indicated that he had been showing progressive withdrawal in preceding weeks, becoming quieter and less sociable. He had been noticed sitting on his bed, moping and crying, saying that he was worried. He frequently expressed a fear about going home, seeming apprehensive that he would become lost or go astray.

On admission to the neuropsychiatric section he was confused, bewildered, perplexed, totally disorientated in all spheres, seemed anxious, apprehensive and depressed, crying a great deal of the time, and speaking only when urged. On the ward he showed alternating brief periods of excitement and depression. He cried a great deal and frequently kneeled at the side of his bed, praying and singing hymns. In interviews, he was actively hallucinated, apprehensive, and tearful, alternately expressing a fear that he was to be harmed, and immediately pleading that he be taken out and killed.

One case can be readily dismissed as coincidence, and this is cited only as an earlier experience to which insufficient significance was attached at the time. During 18 months on the neuropsychiatric section of a large station hospital, sufficiently frequent recurrences of this contretemps and communications with other psychiatrists in the Army lent an increasing credence to this thesis. It should be emphasized that psychotic reactions were extremely rare; but intensification, elaboration and fixation of neurotic symptoms were relatively common. While it had not been optimistically anticipated that hospitalization was invariably psychotherapeutic, the concept that in a significant proportion of cases it was actually "psychonoxious" was at first resisted by many until accumulating evidence left no alternative. Experiences of this type in combination with other considerations led me to press for the establishment of psychiatric facilities completely divorced from the hospital. In the form of the Con-

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sultation Service(1) a mental hygiene clinic was pioneered at Fort Belvoir and has been officially adopted by the Army under that name(2). The majority of the psychiatrists setting up such programs in the Army were first sent to us for a preliminary period of training and indoctrination.

As pointed out by General Menninger(3) current army policy and practice has changed to emphasize the treatment of psychoneurotics away from the protective atmosphere of the hospital environment. Dynes and Springer, naval psychiatrists, remark that "few N-P patients are salvaged once they enter a hospital"(4).

Neurosis in Training

Adjustment can be defined as the interreaction of the individual and his environment, with consequent molding or modification of one or both. A considerable volume of literature has accumulated concerning the psychological hazards of army life, and stressing the rigid inelasticity of the army environment. It is invariably assumed that considerably more adaptability on the part of the individual is required than is the case in civilian life. While this is certainly true in very large part it is also desirable to recognize that there are numerous forces making for what Maskin and Altman have called "the compensating aspects of military life"(5).

Many writers dismiss neurosis occurring during the training period as manifestation of pre-existing abnormality and therefore presenting little or no opportunity for therapy. My experience would indicate that this is only a half truth. I have seen numerous cases occurring during training in which the reaction was in large part situationally conditioned and in which improvement was effected as a result of a simple manipulation of the situation without recourse to any elaborate procedures.

If we consider that adjustment is a life process in which an individual, continually changing as a result of his instinctive and external experiences, adapts himself to a continually changing environment, then good adjustment for the soldier implies that he fulfills his assigned duties with a maximum effectiveness, and at the same time with personal satisfaction(6). When evidences of maladjustment appear, the individual or the environment, or both, must be so modified as to reduce or eliminate the aberrant behavior. Because of a fixed belief in the rigid inelasticity of army life and the hopelessness of attempting extensive modification of the personality in view of the extremely limited time and facilities available, the psychiatrist is often tempted to adopt an attitude of therapeutic nihilism. This is untenable in view of the many potentialities available to army psychiatrists in aiding unstable individuals to adjust. In my experience the most important of these has been the influence of appropriate occupational assignment following competent job analysis; implementation of the positive supportive factors of group living, including such individual phenomena as transference and identification; and, on the part of the psychiatrist, a better understanding of the problems of military training.

It can be anticipated that certain traditionalists in psychiatry will criticize the methods of approach to be described as geographic rather than geologic. It can be answered that the military psychiatrist has a lot of "territory" to cover. In view of the urgency, the use of palliative psychotherapy in an effort to teach the patient to live in some measure of comfort within the confines of his uncured neurosis is justified.

It seems generally agreed that war neurosis differs from ordinary neurosis in which the internal conflict is of essential importance. As noted by Kurt Goldstein(7), Freud stressed the struggle against the hostile forces of the external world as the factor from which war neurosis arises, as contrasted with the conflict between the ego and the repressed forces of the libido, which is the basis of the usual neurosis. There are traumatic forces operating during the training period as well as in combat and their influence in lesser degree in the production of analogous conditions should not be minimized. Any individual is likely to develop increased anxiety in any new situation, and with such an added increment of anxiety there usually come into play various normal, and at times pathological, defenses. I have seen numerous individuals whose past history would indicate that they were relatively well adjusted in civil life, but who show them-

selves to be quite vulnerable to the special conditions of military training. As pointed out by Hargreaves(8) three important relationships are immediately disturbed: with those on whom the individual was dependent, those who were dependent on him, and his relationship to his work or job. The additional impact of monotony, discipline, segregation from the opposite sex, association constantly with other men, absence or freedom from home ties, necessity to win prestige in a new group—all colored with the additional emotional upheaval that may be associated with unresolved resentment and slowly accumulating fears—require considerable stability on the part of the individual to surmount the training period. In individuals whose previous adjustment was somewhat precarious or borderline, the total impact of all those special circumstances might readily produce an emotional decompensation unless they are afforded early support.

It is important, therefore, that the psychiatrist learns early to differentiate cases into those which have a severe characterologic and chronic disturbance as a basis and those in which situational factors are predominantly operative. When, to the problems of this latter group and also to those of the former group in which there exists what can be called an "occupational leverage," the psychiatrist brings his understanding of the potentialities available to him, the concepts of a type of therapy begin to appear.

Therapy

Therapy may be considered under various headings. A convenient classification is a simple one of (a) superficial and (b) deep. In the former instance, practical support is afforded the patient in the nature of advice, guidance and assistance in the management of life situations and environmental difficulties through social service aid and other readily available modalities. Emotional support is also afforded by the therapist through sympathy, exhortation admonition, encouragement, humor, art, recreation, companionship and general stimulation. It is customary to employ first the relatively less complex maneuvers in handling any problem and resorting to the long, involved and rather intensive deep reorientation of the personality structure in only those cases in which the former methods fail(9).

It is important to point out immediately that deep therapy is not feasible in the Army. Individuals unable to function without this type of therapy must usually be separated as rapidly as possible. However, by the establishment of what might be termed "milieu therapy" the number of such hopeless cases is considerably less great than is popularly supposed. The cornerstones of this program are :

(1) Thorough indoctrination of line officers, non-commissioned officers, and unit medical officers in the principles of mental hygiene and mental illness and the relation to morale, efficiency, and the incidence of neuropsychiatric disease.

(2) As a result of such sensitization many "potential cases" are aborted by early management within the unit and cases requiring referral to the psychiatrist are seen much earlier. The factor that more than 90% of all our patients are referred in the first few weeks of training has greatly influenced our concepts of psychiatric therapy.

(3) Therapy conditioned on an understanding of the situational stress, and the treatment of the individual by whatever permissible alteration of the situation when extensive alteration of the personality cannot be accomplished.

(4) Individual and group therapy on the basis of attitudinal correction rather than therapy directed toward symptomatic manifestations or specific disease entity.

(5) Utilization and implementation in every way of supportive mechanisms operative in the group as, for example, by encouragement when indicated for the patient to substitute new dependencies for the former ones that are interrupted. A phenomenon of great value is the capacity of insecure individuals to obtain a collective security through identification with the group. Included in this is the satisfaction of conscious motivation and the mobilization of group social pressures.

(6) An attitude of pragmatism on the part of the psychiatrist.

The Influence of Occupational Assignment

In the pragmatic approach to the question of therapy of neurosis occurring in a military training center, too much emphasis cannot be placed upon the appropriateness of occupational assignment. This involves a job which is within the soldier's capacity to learn and perform, in which he is neither over- nor under-classified, which he believes meaningful and important, and which keeps him completely occupied. All of these factors must be present. From this the soldier derives a feeling of self-confidence, of importance and of belonging. Numerous research studies conducted by the information and education division of the Army have indicated that satisfaction with job assignment is, perhaps the most important single specific factor of morale(10). I would cite as first prerequisite for the military psychiatrist, therefore, that he be the most knowledgeable man in the Army concerning the modalities and complexities of job training and assignment. There is also the corollary that where reassignment is impossible it is of utmost importance to explain to the soldier the reason why, and "sell him" on the job he has.

A few cases may be cited to illustrate the importance of this print:

Private B: A 20-year-old white male referred because of nervousness, slow learning and complaints of heart trouble. At the first interview he showed marked instability, frequently crying and sobbing uncontrollably. He admitted that he had always been rather nervous and cried readily under the slightest tension. He was anxious to continue in training and wanted to be a cook. Although somewhat below average in intelligence on mental testing, he had graduated from an agricultural high school and then had worked as a rodman and later ran his own lunchstand. Past history indicated that soldier was an only child, the father having died when patient was three years of age. He did rather poorly in grammar school but showed marked improvement during high school and seemed to get along quite well with people, adjusting himself to personalities and situations without too much trouble. He had always been of a somewhat "nervous type," and this was thought to have been inherited from the father.

While undergoing physical studies for clearance because of his complaints of heart trouble, it was recommended by the hospital that he be admitted for medical discharge because of "severe anxiety neurosis." This was quite reasonable since at the time the soldier was highly tense and nervous, speech was rapid and staccato, his lips trembled and his hands shook constantly. He cried often and easily, and in the first interview in the consultation service he frequently wept overtly.

Because of the soldier's eagerness to continue in training and the potential leverage implicit in his interest in cooking, the hospital agreed to a further trial. He was released to the "custody" of consultation service. At the completion of the basic phase of training, he was transferred to cooks' and bakers' school and went through this course without incident, completing it in a thoroughly satisfactory fashion. He was seen about four times in interview during this period, during which emphasis was placed on encouragement of proper attitude and upon the soldier's integration with the group. He showed rather remarkable improvement, making an excellent appearance and each time seemed quite interested and determined. In the last progress report from his company it was remarked that he was average for his platoon and further study by the consultation service did not seem required.[3]

It should not be thought that neurotic manifestations occur only as the result of the implications to the individual of combat training, or from his being misclassified in a too-arduous rôle.

Private C: An 18-year-old small, immature-appearing, dark-complexioned white male referred by the dispensary surgeon for neurological consultation because of complaints of dizziness, vertigo and twitching of the mouth. There was a history of skull fracture six years previously, following a head injury, with a few minutes unconsciousness. He was examined by a doctor at that time but was not hospitalized. There had been absolutely no trouble until five days previous to the interview, when he began to notice dizzy sensations and his head began to throb. At that time twitching of the mouth developed on the left side. Neurological examination disclosed a depression of the bone in the right occipito-parietal region but otherwise was completely negative. It seemed unlikely that the present symptoms were related to the old head injury.

The soldier, born in New York, had gone to Puerto Rico at the age of two months. He had two and one-half years of high-school education, leaving at the age of seventeen. He had returned to the United States about six months previously with

[3] Some years later the author was greeted by a well-fed and congenial mess sergeant in an installation some thousand miles from the original station. It was gratifying that this healthy, poised young man was not recognized as the former patient. He had completed several years of very valuable and effective service and was shortly to be discharged in the best condition of his life. It was sobering to realize that we had had to struggle against the then prevailing medical attitudes to keep him in the Army.

his father, and after working awhile for his uncle in a grocery store, he enlisted in the Army. In Puerto Rico he had spent one year in a military youth organization and was very fond of close-order drill, marching and the military life. He was anxious to be a fighter and on the first firing for record he made a very high score, qualifying as an expert. On the army general classification test, he had scored in Grade IV which is below average. He had been selected to attend army clerks' school and was scheduled to transfer to this training at the end of the week. Apparently his symptoms developed soon after he had been notified that he was to go to clerks' school.

He was recommended for removal from the list for clerks' school and for continuation with the assignment in regular training. He was seen again two weeks later, and at that time there was a remarkable change. The twitching of the face had completely disappeared and there was no recurrence. He had no further dizzy spells or headaches. He seemed to take pride that he was now with a "tough outfit" and had a "tough sergeant." He was building bridges, marching and working very hard. He seemed to enjoy all of this very much, and had no complaints to offer. He was seen again at the end of the training period and since the improvement was still maintained, his case was closed as recovered from conversion hysteria.

The Artificial Creation of a Total Milieu

The potentialities for psychotherapy through the creation of a premeditatively designed total milieu of constructive purpose first began to emerge early in 1941 soon after the organization of a special training unit at our center (11). As authorized by the War Department for each replacement training center, they consisted of separate training groups to which men could be sent if they were not succeeding in regular training, because of: slow learning ability, language handicap due to foreign birth, illiteracy, mental deficiency, and emotional instability.

Primarily organized for the benefit of the illiterate and mentally retarded, it was early found to be extremely useful for those cases of less ominous, situationally conditioned, emotionally maladjusted or physically substandard soldiers. This unit possessed an unusually high quality of leadership and intelligent, kind, sympathetic, tolerant officers and non-commissioned instructors who were especially alerted to the problems of the psychologically maladjusted. It was particularly interesting to note that many of the individuals sent to this unit quickly underwent a complete remission or a remarkable diminution in gross neurotic symptomatology and, in many instances, could be returned to regular training for successful completion. The help, understanding, and reorientation given them with resultant increase in self-confidence, feelings of belonging and of importance, plus the opportunities for solution of pressing personal problems in a non-hostile and relatively less urgent atmosphere unquestionably aborted many reactions that otherwise would have become chronically fixed or greatly intensified.

During this period War Department regulations required such attempts at special training before discharge could be recommended in individual cases. Because of the very large number of eligibles for such training at the time, the limited available space and facilities frequently necessitated that a priority for transfer be assigned to cases. The lack of vacancy thus excluded from this opportunity in many instances all except relatively hopeless cases which had to be sent there in order to fulfill requirements before being brought up for discharge. Despite this, of 2600 soldiers sent to this unit between August 1942 and November 1943 (equally divided between white and colored) approximately 55% were returned to regular training. While some of these again failed and had to be discharged, the greater number were able to continue the regular training course successfully. This is even more remarkable inasmuch as there was no provision for reclassification to limited service of mentally limited individuals between December 1942 and December 1943, and this also resulted in the elimination of many who probably would have been retained under later regulations.

It was long my feeling that with a special unit of this type and with reasonably cogent selection of participants, from 75% to 90% of potential and actual misfits could be reconditioned for useful service. Under the energetic leadership of General Menninger, Director of the Neuropsychiatry Consultants' Division, Surgeon General's Office, an experimental project was established in February of 1944 with pilot centers at the Quartermaster Replacement Training Center, Camp Lee, Virgina, the Engineer Replacement Training Center, Fort Belvoir, Vir-

ginia, and the Ordnance Replacement Training Center, Aberdeen Proving Ground, Maryland. The Belvoir experiment was recently described in a paper by my assistants. (12). Psychoneurotic soldiers from overseas theaters and from the Zone of Interior who were deemed salvageable were transferred to the "developmental training battalion (experimental)". Here was established an experience of planned group living. What was called "indirect group therapy" was accomplished through the indoctrination of the training personnel and by the mobilization of all of the group social pressures. As a result of the reacculturation an extremely high percentage of these men were returned to duty. An essentially similar program was established in the Army convalescent hospitals.

A Validation

The author's transfer to the amphibious training center at Camp Gordon Johnston late in 1944 provided an almost ideal opportunity for the critical evaluation of the previously described pragmatic approach in an isolated, barren, desolated island of sand off the coast of Florida, where officers and men were being trained in the complexities of modern amphibious warfare. Previously designed as a temporary training site for the training of hardened regimental combat teams with engineer amphibian brigades in combined operations, it was singularly devoid of all the creature comforts ordinarily associated with the usual Zone of Interior training camp; all construction was temporary and Theater-of-Operations style. Troop facilities were represented in stand-up mess halls, sand-floor barracks, and "bucket" latrines. The locale and the recurrent racial tensions merely added to the complexity of the imposing problems faced by the psychiatrist. When there was later added an additional impact in this situation of redeployed troops, a maximum test of these theories was achieved.

At the initiation of the program there was a plethora of psychiatric patients which had overwhelmed the station hospital neuropsychiatric section. It is believed to be a validation of the program that in the second six months the number of referrals to consultation service showed a decrease of nearly 50% from that during the first six months. This is attributed almost entirely to the cumulative effects of six to eight hours weekly of lectures and discussions with the officers and non-coms, and the establishment of intelligent methods of "man management" within the units, a process which has been referred to as "indirect group therapy".

More significant was the associated and continuous diminution in the size of the neuropsychiatric section in the hospital and shortly before the war ended it was possible to dispense with it *entirely,* since the occasional rare psychotic was immediately evacuated. There continued to be a considerable number of psychoneurotics, but all of them were handled on an out-patient status, and the great preponderance continued on duty, performing in such fashion as to occasion no complaint from anyone. This was *not* accomplished by any large-scale discharge but rather through a conservation of man power. Every effort was concentrated toward the handling of "problems" with the unit by the company leaders before they became "cases." The use of "regimental social workers" on liaison was of great aid as effective extensions of psychiatric intelligence reaching into all areas of the widely separated units. Efforts directed toward the mobilization of group pressures extended even into the surrounding communities where considerable attention was directed toward the off-post recreational facilities for the men.

It was repeatedly demonstrated during this experience that the soldier's attitude toward his illness was of far greater influence in determining his usefulness to the armed forces than the actual severity of his nervous manifestation.

War and Post-War Implications

It is almost tautologic to emphasize that universal military service and the implications of total warfare present the greatest possible challenge to the psychiatric profession in terms of magnitude of neuropsychiatric disease incidence. There are immediate and future implications of both a social and economic nature. The rejection rate at induction centers is higher for personality disorders than for any other reason. The highest incidence and greatest discharge rate for neuropsychiatric cause occurs during the first

three months of training and within the period encompassed at the military training center(6). A circular letter of the Surgeon General(13) called attention to the incidence of neuropsychiatric cases in combat, and noted that when these cases are properly recognized and treated at forward areas, up to 80% can be returned successfully to combat duty; whereas, when improperly evaluated and unnecessarily evacuated to rear areas, only from 5 to 10% can be returned to duty. It has been the author's experience that an analogy can be drawn during the training period with reference to early recognition and avoidance of unnecessary hospitalization.

The implications for the military psychiatrists during war relate largely to the effect this problem has on operational effectiveness. In the latter half of 1943, medical discharges for psychiatric causes rose to 45%. In this connection there seems to have been too much stress early in the game on what can be called "type casting" of the psychiatrist in the role of "executioner." The mission of the Medical Corps is the conservation of man power and the preservation of the military forces(14). The success of neuropsychiatry is measured by the number of soldiers kept on duty—not by the number eliminated. It is unfortunate that the facility with discharges are computed and their dramatic import have occasionally obscured public attention to the magnitude of the positive job being done because the latter is less obvious. The urgency of preventive measures is pointed up by the tremendous cumulative loss of training time and money. There is an unfavorable effect on group morale with the occurrence of each severe mental casualty. The "contagiousness" of psychological attitudes is universally recognized. For the military psychiatrist, early treatment of these conditions close to the point of origin and avoidance of unnecessary evacuation has been adequately stressed. An extensive reconditioning program for the physically disabled casualty has been developed to soften the transition of these individuals back to civil life. A similar program has been especially adapted to the needs of the psychiatric casualty, both for restoration to duty and transition to civil life.

For the civilian psychiatrist, the gradually increasing volume of casualties returning to the community is a matter of considerable concern. It is anticipated by the Veterans Administration that the total will mount for many years after the cessation of the war. It is essential that there be no lagging in preparation for these men. The neuroses of war occurring in combat and during military training present an orthodox paradox. While in one sense they are not different from neuroses occurring in civilian life, they are in another sense a distinctly different disease. External factors play a far greater role than the internal conflicts which are usually the basis of the ordinary neurosis. Therefore, despite the overwhelming magnitude of the problem, a rapproachment with successful attack is possible through a pragmatic approach to the question of therapy. Through intelligent manipulation of the milieu and the utilization of clinics entirely divorced from hospitals, in which are utilized the services of the psychologist, the psychiatric social worker and the psychiatrist, the total impact in terms of disruption of the community will be greatly lessened. Therapeutic nihilism because of the relative impossibility of attempting deep therapy in each case is completely untenable.

Under no circumstances should these individuals be routinely hospitalized in special veterans' hospitals until we have exhausted every possible resource. It is my firm conviction that hospitalization renders many of these conditions chronic. I do not wish to be misunderstood as in any way disparaging the importance and necessity of deep therapy or of special hospitalization in many cases. However, the first approach to these cases should be based essentially on pragmatic considerations and directed toward the elimination or diminution of insecurity and fear. For this purpose nothing approaches purposeful, meaningful, important and personally satisfying activity in bringing the patient back to a situation in which he need not fear anything in particular. In an extremely able article Burlingame(15) has pointed out the major importance of successful job adjustment for emotional and mental health. When, on the contrary, a neurotically disposed individual is placed on permanent compensation and particularly if he is kept permanently in a veterans' hospital, there is fre-

quently a change of whole personality in the direction of development of chronic anxiety or increasing fixation of symptoms. It is my feeling that the patient is robbed of motivation and subtly encouraged by that milieu to surrender himself to the neurosis with consequent automatic elaboration and intensification of symptoms. In many instances there is an iatrogenic trauma with apparently a resultant "structuralization of the neurosis."

Numerous recent studies of the "successful neurotic soldier" describe frequent instances in which individuals with an imposing psychoneurotic predisposition manage to stand up well in battle. Needles(16), in a paper in which he courageously reverses his previous position, raises grave doubts as to the validity of any of our particular screening systems. Dynes and Springer(4) have emphatically drawn attention to the importance of the individual's attitude in determining his adjustment and usefulness rather than the actual severity of his symptoms. Whitehorn(17) has ably established the importance of consideration of the patient's attitudes, rather than disease entity.

For the future the author agrees with Burlingame(15) that psychiatry must work through social groups. The broad concept of consultation service can be translated with little modification to the uses of industry. There is a direct similarity between the described method of "indirect group therapy" with its emphasis on working through the NCO's and junior leaders in the Army and Burlingame's "psychiatry's great opportunity in industry now lies in the education and training of foreman and supervisory personnel." The reinforcement and recruitment of favorable reactions within the group, the development of group loyalties and feelings of identification all have their analogues in industry as in the Army. The importance of proper job assignment in useful, gainful, thoroughly occupying, self-satisfying and socially esteemed work which is neither above nor below the capacity of the individual, is a *sine qua non*. Techniques to elevate morale and improve attitudes in the Army should also be applicable to the elevation of morale in industry.

It is proposed that in the future psychiatry should give first priority to "preventive human maintenance."

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THE USE OF HYPNOSIS IN THE TREATMENT OF ACUTE COMBAT REACTIONS

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INTRODUCTION

Neuropsychiatric casualties constituted from 30 to 35 percent of the total combat casualties of the past war. With wards filled, with limited personnel and facilities, with a pitifully small staff able to administer therapy, it seemed of paramount importance to shorten the period of time required for treatment. Various methods were tried, none so controversial and at the same time successful as hypnosis. In the following paper its use, application, limitations and defects will be discussed.

SETTING AND MATERIAL

This work was done on a forward island in a hospital which was set up to care for psychiatric casualties of the Okinawa campaign. The installation was a 600-bed field hospital with adequate physical facilities but no special provision for closed ward patients. The medical officers had been schooled for combat psychiatry in the School of Military Neuropsychiatry at the Mason General Hospital, Long Island, New York. The patients included members of all three services, 50 to 60 percent being Marines. They entered the hospital between 8 and 23 days after the onset of their combat reaction and most of them had received some form of sedative treatment with little or no therapeutic effect.

It must be emphasized that hypnosis as discussed in this paper is thought of only as an adjunct to an over-all therapeutic program which consisted of group individual psychotherapy, work, occupational, recreational and activity programs; and in which the patient received adequate physical care and was treated for any concurrent diseases.

INDICATIONS

The hypnotic procedure was used in approximately one-third of all cases and was considered as indicated in the following situations:

(1) In most cases in which there existed amnesia or "black-out" for a part or total of the combat experience (never was a set rule applied but hypnosis was preferably used). (2) As a sole approach to patients who were in a state of confusion making any other kind of communication difficult or impossible. (3) To minimize the effects of severe symptoms thereby enabling the patient more adequately to participate in the total therapeutic program. (4) To give patients insight into the correlation between emotional conflicts and somatic and psychological complaints. (5) To help the physician distinguish between an acute combat reaction and a long standing pre-combat neurosis. (6) To demonstrate to a group the advantages of the hypnotic technique and also to illustrate material which formed the basis of a group psychotherapy session. (7) As a form of sedative induced by post-hypnotic suggestion.

METHOD OF APPLICATION

The approach to hypnosis and the method of inducing the trance was patterned after Erickson(1). Either as the subject of a group psychotherapy session, or individually, whichever was indicated at the time hypnosis was explained and discussed. The fears, doubts, misunderstandings and superstitions which have in the past surrounded the psychological state of hypnosis were aired. The patients were taught that most people develop a state of sleep easily and that approximately 70 percent of all subjects with adequate training can develop deep trances. In addition it was pointed out that no influence can be exercised upon the subject other than that which tends to develop in any inter-personal relationship, that the phenomenon cannot be used for anti-social or criminal purposes and that an individual cannot be forced to perform an act foreign to his personality or fundamental beliefs. Doubts

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and questions in the minds of the patients were discussed. It was pointed out that no one can be hypnotized against his will or without his cooperation and that the best subjects are intelligent, normal people. It was strongly emphasized that the subject largely controls the trance state(2). Since there were always patients in the hospital who were undergoing therapy with hypnosis, the phenomenon was frequently demonstrated.

In the actual therapeutic session, an attitude of calm detachment on the part of the therapist aided the over-anxious patient. However, the physician was conscious of the fact that each patient required an individual approach and, as Erickson points out, no set rigid technique could be followed since the personality needs of the patient must be met. Some subjects responded to a domineering attitude while others cooperated with the therapist best if persuaded, coaxed or placed into a trance via steady, monotonous, repetitious suggestions.

The following procedure to induce trance was most frequently used. To give the patient some feeling as to how his body would respond to suggestion, use was made of the Kohnstam phenomenon(3). He was told to stand with eyes closed in a doorway and to press the backs of his hands against the door frame. This position was maintained for 2 to 3 minutes during which time the therapist talked calmly, constantly, exhorting him to *"press with all your might"* and *"harder. . . . harder"* and told him in a confident manner that when he stepped forward his arms would float outward and upward from his sides into the air. If properly performed, the phenomenon occurred as suggested. Many other such procedures were used and the one given is but an example.

The patient was then placed upon a bed and told to breathe deeply and regularly. As he did so the therapist directed his movements, always noting carefully physiological functions and suggesting their occurrence before they developed. The patient was then told over and over that he was completely relaxed, that every muscle and fiber of his body was soft and flaccid, and that he was becoming more and more drowsy and sleepy. Finally, he was told that his eyelids were so heavy that he could not hold them open and that they were closing. As the eyelids began to flutter and close, indicating the earliest stages of trance, and as the trance proceeded, the various hypnotic phenomena(4) were used to determine its depth. The patient often was suggested into a deeper trance by being told that as he fell deeper and deeper asleep his left or right arm would become lighter and lighter and finally float into the air and that the hand would move slowly toward the nose, not touching it, until he was in a deep trance. From here the procedure depended upon the purpose of the therapy. If an amnesia was to be relieved, it was suggested to the patient that he recapitulate the events which occurred immediately preceding and during the time under investigation. The material thus recalled was then handled as in any psychotherapeutic session with a patient. At the close of a trance, if subsequent sessions were to be held, a post-hypnotic suggestion was made that the subject would allow himself to be hypnotized more readily the next time; and the procedure was often made as simple as placing the patient upon a bed and putting him into a trance by "counting three and touching the nose".

Hypnosis versus Narcosynthesis

The use of barbiturate drugs and narcosynthesis was not ignored, but hypnosis was preferred. In the first place, the majority of patients were greatly disturbed and therefore eager for treatment. Consequently rapport between patients and doctor was easily, rapidly, and with few exceptions firmly formed and the first requisite for successful hypnosis assured; hypnosis further emphasized this rapport. Once hypnosis was established in any patient or group of patients, the procedure became accepted and could be used any place at any time without the problems involved in making venapunctures, mixing drugs, maintaining sterile conditions, etc. In near combat conditions, this was a distinct advantage. Also, following a first hypnotic session with any patient, it could in most cases be induced subsequently in less time than the injection of a drug into a vein would require.

There were other advantages. Under hyp-

nosis it was possible to control the degree of abreaction. The re-experiencing of the fear and conflicts, and their expression during an abreaction sometimes produced severe muscular tensions and dissociative behaviour requiring three to five corpsmen to control. During a successful hypnotic trance not only the therapist but the patient could control this behaviour and unnecessary, extreme, frenzied abreactions avoided. During narcosynthesis, on the other hand, once an abreaction was started, it often either ran its course or continued until the effect of the drug wore off without either the therapist or the patient being able to modify its course.

The better a patient understood the factors involved in the production of a neurosis, the more rapidly did he gain insight and obtain improvement. Under hypnosis these factors could be placed in bold relief and used to enforce psychotherapy. Also, the quantity and quality of subconscious material allowed upon the conscious level at any one time could be regulated.

Following the narcosynthetic interview, frequently the patient was groggy, confused and lacked muscular coordination. He slept for a prolonged period and missed one or two meals. The same problems were not faced with hypnosis and the patient awoke from the trance alert and comfortable and if anxiety had been produced by the discussion and consideration of emotionally disturbing material, he could be given post hypnotic suggestion preparing him for and aiding him to handle the anxiety so produced. An occasional patient who objected to hypnosis on a religious basis or who for some reason could not cooperate in a hypnotic session, was given narcosynthesis.

Case Histories

The following case histories are reports as collected and kept under near-combat conditions and illustrate the important indications for hypnosis.

Case 1.—This patient was a 24-year-old single, well developed and nourished white male of Polish extraction who entered the hospital complaining of severe headache and episodes of sudden abrupt wakening at night in a state of terror, accompanied by sweating, tachycardia and a feeling of impending death. These symptoms were precipitated and made more severe by airplanes and sudden loud noises and had been increasing in severity for 8 months preceding admission to the hospital.

Family History.—The family home had always been maintained on a farm in Ohio where the patient had lived prior to induction into the service. The home environment was pleasant, without conflict between parents, both of whom were living and well except for a history of cerebral accident which had occurred to the father in 1938. The patient and one brother had nursed the father through this episode during which he had complained severely of headache. There was no family history of psychopathology, or personal maladjustment.

Personal History.—The patient was the 7th of 10 siblings. Birth, infancy and childhood development were normal with no history of nail biting, thumb sucking, temper tantrums, somnambulism, stuttering, abnormal fears or other childhood neuropsychiatric determinants. He had completed the 8th grade of school at the age of 15 without difficulty and had worked on his father's farm until induction.

Military History.—He was drafted in May 1942 and had no difficulty adjusting to basic training or to the army in general. He was sent overseas 9 months after induction and completed the Aleutian and Marshall Islands campaigns, working as a cook in combat areas without difficulty. He was then transferred to Leyte where his combat trauma occurred.

On Leyte in October 1944, the ammunition dump near the headquarters company to which he was assigned was hit by an enemy bomb and was blown up with much destruction and loss of life. The patient was talking with a group of buddies when the air raid warning sounded and an enemy bomber approached. He started to run towards his fox hole, heard the bomb dropping, felt as though it were coming "directly at him," but remembered no more until "waking up" the next morning in a fox hole outside of the ammunition dump. He was shaking uncontrollably, had tachycardia, dizziness and a severe headache, and was told that during the night he had "taken a couple of fits and tried to leave the hole," and had to be restrained in a blanket by his buddies. He refused to report to the battalion aid station stating that he "wanted to stay with his buddies" and that he "would be all right." He developed a tic of the left half of his face and left corner of the mouth and remained "nervous and easily upset," during the rest of 1944 and the early part of 1945.

He went into combat on Okinawa with his outfit on April 1, 1945, but with every bombing, developed severe headache, uncontrollable tremor, tachycardia and sweating and "ran for a fox hole." At no time did he bleed from the nose, ears or mouth, vomit or pass blood in the stools. He remembered having no combat dreams but exhibited a marked startle reaction and woke frequently at night in a state of terror. He found duty persistently more difficult and was evacuated to the neuropsychiatric center for treatment and disposition.

Physical Examination and Laboratory Work.—Upon admission to the hospital physical examina-

tion including eyegrounds was negative and laboratory work including white blood count, differential, hemoglobin, urinalysis and x-ray of the skull was negative.

Course in the Hospital.—He did not take part in the group psychotherapy sessions or the activity programs, and remained irritable and complained of severe persistent "pressure-like" headache which failed to respond to symptomatic therapy. He was afraid of the night and frequently found himself suddenly awake in a state of anxiety, with fear of impending death, and acute exacerbation of all symptoms. He denied having combat dreams and refused hypnosis stating *"it's my head, give me something for my head."* One evening after a particularly bad day and after having expressed fear of sleep, he agreed to allow himself to be put to sleep by hypnosis *"just for some relief."* He approached the session with misgivings but stated that *"the other fellows say it can be done and I've got to get something for my headaches. I've taken barrels of aspirins but it hasn't done any good."* He was placed upon a bed and hypnotized to sleep. The post-hypnotic suggestion was given that he would return to the ward, be very, very sleepy, and that he would fall to sleep and remain so all night without dreaming. At the cessation of the trance, the patient expressed amazement at the marked relief he felt. Good rapport was established and he returned to the ward where he slept as was suggested.

The following morning he allowed himself to be hypnotized and was regressed to the day in October 1944 on which the symptoms began. An amnesia covering the following events was resolved. On that evening he and his buddies were discussing the future of the war. They heard the enemy plane approaching and started running for their fox holes. The patient cried out *"I'll never make it! I'll never make it! It's coming right at me!"* He threw himself to the ground and the bomb landed approximately 75 yards in front of him, the concussion throwing him several feet into the air. (At this point in the hypnotic trance he became limp and unresponsive for a matter of seconds and then stated, *"I don't remember, I don't remember."* He apparently had been knocked unconscious for a few seconds. He then began to shake vigorously and an expression of terror formed upon his face and he cried out, *"I'll be killed! I'll be killed! I'm scared to death and can't move!"* He then described the exploding ammunition dump and the sound of flying shrapnel and complained of feeling numb all over.) Another soldier called out to him and he answered back, *"Yes . . . . I'm out here."* He was then carried to the beach out of the danger area and placed into the fox hole where he remained for the rest of the night, becoming aware of his surroundings the following morning.

The patient began to participate actively in the group psychotherapy discussions and other aspects of the total therapy program. The headache disappeared and instead of sudden, unexplainable episodes of night symptoms he began having battle dreams in which he relived his combat experiences. He usually remembered his dreams, but occasionally would waken with a recurrence of his complaints, feeling as though he had dreamed but unable to remember clearly. Upon such occasions he responded to hypnosis and the dream, always of severe combat experiences and conflicts, was brought to the conscious level. As insight increased, all symptoms including the facial tic disappeared and after four weeks of treatment he returned to non-combat duty.

Abstract Case 2.—This patient was a 21 year old, well developed and nourished white Marine who was admitted to the hospital because of stuttering. He had an amnesia for the acute combat reaction. He had adjusted to 30 months of military service without difficulty and had experienced several days of heavy mortar shelling and 3 days of front line combat. Family history was non contributory, developmental history within normal limits; and physical and laboratory examinations negative. While in the hospital he participated in the total therapeutic program and improved except for the stutter and amnesia which persisted. Under hypnosis the amnesia was relieved and the patient revealed that during an artillery barrage fear was intense and uncontrollable tremor, tachycardia, sweating and crying occurred. He was given morphine by a medical aid man who helped him back to the battalion aid station. On the way he saw two of his buddies who had been resting behind the combat line returning to the front. He became tense and said, *"I don't want to talk to them. They'll think I'm yellow for going back. I can't talk to them,"* and at this point the stuttering began. Under hypnosis he stated, *"I don't want to talk to them . . . . I can't talk to them because I'm stuttering."* Psychotherapy which he had already received was reinforced under hypnosis and the post-hypnotic suggestion given that he would awaken with a clearer understanding of his speech difficulty and that he would be able to talk without stuttering. This occurred as suggested and after further participation in the therapy program he was returned to non-combat duty.

Abstract Case 3.—This patient was a 25 year old, married, well developed and nourished white infantry rifleman who entered the hospital complaining of a "lump in my throat," insomnia, anorexia, mild episodes of tremor, tachycardia, sweating and muscular tension. He had adjusted to the service without difficulty and had been in combat 40 days when he developed diarrhea accompanied by weakness and temperature. He was evacuated and treated for amœbic dysentery and hookwork infection. At the replacement depot while awaiting return to duty, diarrhea recurred without temperature, he complained of a lump in his throat and was sent to the neuropsychiatric center. Family history was non-contributory except for a parental divorce which occurred when the patient was 10 years of age. The patient had adjusted to living with his father for whom he worked as an expert lathe operator for 6 years prior to induction into the service. Developmental history was within

normal limits except for a childhood fear of the dark and enuresis to the age of 6. He had been married 5 years with an adequate marital adjustment, and had two children aged 3½ and 2½ years.

Physical and laboratory examinations were negative. He participated in the total therapy program but continued to complain of the "lump" in his throat and expressed fear of having "cancer or something." Under hypnosis he revealed a combat experience which he had neglected to relate previously. For a period of one week while carrying ammunition and supplies forward, he had had to pass daily an enemy corpse which had lain for some time in the center of the road. The odor and condition of the corpse nauseated him but he avoided vomiting until several days later when, while moving forward in the dark, he accidentally stepped into a pile of corpses. At this time a sudden "horrible" convulsive motion of the stomach occurred and his throat tightened in an unsucessful effort to prevent regurgitation. Under hypnosis he remarked that this was the first time he had felt the "mass like" feeling in the throat. Psychotherapy and an explanation in simple terms of the relationship between the autonomic nervous system, smooth muscles of the body and emotions were given. He, thereafter, participated more actively in the total treatment program and was returned to duty without recurrence of diarrhea, nausea, vomiting or globus hystericus.

Discussion

These case histories illustrate the use of hypnosis in the treatment of acute emotional disturbances. As indicated above, there can be no substitute for a complete over-all psychotherapy program. Hypnosis is used as an adjunct to uncover material essential to a more complete synthesis of the combat experience into the conscious processes of the patient and towards his understanding of his own emotional reactions and their effect upon his own body and behavior.

The first 2 cases are typical of patients who present themselves with an unresolved amnesia which protects them from recalling disturbing experiences and emotional conflicts. Obviously they must be removed before intergration of the experience and adjustment of the conflicts can be achieved. In the well integrated personality, the removal of the amnesia, along with the over-all therapeutic program, is all that is necessary to effect a complete recovery. Very frequently symptoms such as stuttering, headache and paralyses are immediately relieved when the factors producing them are remembered and accepted by the patient.

The first case also illustrates the use of hypnosis as a sedative measure. This patient had been afraid of sleeping for many weeks because of the sudden, unaccountable waking episodes accompanied by fear, tremor and sweating. Barbiturate therapy had failed to produce uninterrupted sleep. The relaxation and post-hypnotic sleep combined produced complete relief for a short period which gave the patient sufficient confidence in the procedure to allow further investigation of his problem. Large doses of barbiturate and other sedatives often make the patient groggy and difficult to handle without relief from battle dreams and nightmares. Patients under hypnosis, for any reason, can be given post-hypnotic suggestions concerning sleep which are effective. (One of the medical officers had hypnotized all patients on one ward on various occasions. He gave each the post-hypnotic suggestion that on the occasion of his nightly rounds he would touch each on the foot and that the patient would fall asleep and remain so until morning. This ward was put to sleep with less time and effort than passing drugs would have taken).

All 3 cases illustrate the relief of uncomfortable symptoms concurrent with psychotherapy and participation in a total therapeutic program. The removal of symptoms by positive suggestion without treatment of the underlying problems is to be decried. However, severe tremors, headaches and paralyses which otherwise will keep a patient from active participation in the athletic and occupational programs can be minimized sufficiently to enable participation. In order to avoid the mistake of letting the removal of symptoms constitute the only therapy, disabling symptoms such as tremor or paralyses can be removed except for a remnant in a finger or a toe. The patient can then participate in the activity portion of the program and he and the therapist still be reminded of the psychiatric disturbance which remains to be treated.

One of the most difficult concepts to develop in the treatment of acute combat reactions is the patient's understanding of the effect of emotional disturbances upon the body. Most individuals still want to believe that their "mind or will power" controls

their thoughts and body. They reject the fact that emotions do affect the body. It is here that many patients withdraw from the therapist feeling that he infers that they are "imagining" their difficulty or that it is "all in their minds" and that there is "really nothing wrong". (The third case illustrates this point. Under hypnosis the patient himself observed the effect of the "sickening smell and sight" and developed an understanding of the emotional etiology of his nausea and vomiting). Under hypnosis this relationship can be demonstrated to the patient, particularly when dealing with muscular tension, backache and the tension type of headache.

Successful hypnotic therapy with one patient opens up the way for successful therapy and hypnosis with other, perhaps more doubting patients. Group psychotherapy sessions can be based upon a hypnotic interview carried out before the group. The behavior of the subject as he tenses, cries out to his buddies, talks, etc., while under hypnosis demonstrates visibly to the group the effect of fear and conflict upon the body. The muscular tension produced by emotional conflict can be pointed out. When a group of patients can hear another patient say "I'm scared, I'm shaking because I'm frightened", or "I can't talk to my buddies, they'll think I'm yellow for cracking up, I can't talk because I'm stuttering", etc., insight develops more rapidly. These sessions of special therapy are always followed by successful group discussions and requests for hypnotic therapy by other members of the group.

So far in discussing the use of hypnosis we have described its use in a very localized and well defined problem, the one of acute situational combat maladjustment. Here we deal with a phenomenon about which we were well informed, where we had adequate material at hand and where we were aware of the main difficulties and pitfalls to be encountered in therapy. We have not mentioned the use of hypnosis as a tool for therapy at large in dealing with problems of long standing which go far into the background of the patient's personality formation. The fact is that many acute localized reactions occurred which could not be separated from other problems of maladjustment dating from the patient's pre-service life. As it is impossible to separate these completely, or for that matter very frequently at all, therapists are greatly helped by the use of hypnosis in investigating the connection between these maladjustments. The causes and extent of the pre-service maladjustment and its effect on the combat situation can also be investigated. In this sense hypnosis is not used as therapy for long standing maladjustments but as an aid to the immediate therapeutic aim.

Dangers and Disadvantages

There are some dangers encountered in the use of hypnosis that cannot be ignored. Obviously, many acute situational maladjustment reactions occur in individuals who have long standing and severe neurotic behavior patterns which require more than brief psychiatric care. Under hypnosis, it is frequently easy to dip down into past experiences and while this may be an advantage at times, unless a therapist is prepared to handle complete psychoanalyses, unless he is discerning and aware of factors that are sometimes just as well left unrecognized by the patient, harm can be done.

There is danger of producing an actively psychotic patient. There are many individuals who are fundamentally psychotic, but who, if the environment is ideal and free of excessive stress and strain, can make borderline adjustments and avoid incapacitating psychotic symptoms. By uncovering repressed material and by reviewing anxiety-producing experiences under hypnosis, the strain upon adjustment mechanisms is increased and symptoms of psychoses develop. While it is true that the incipient psychosis is present previous to the acute illness and that the use of hypnosis only accentuates the psychotic behavior, the fact remains that a frank psychosis is to be avoided if possible.

Another disadvantage stems from the strong inter-personal relationship that makes hypnosis possible. The aim of any psychiatric therapy is to leave the patient in such a condition that he can function adequately in his environment without dependence upon symptoms or psychiatric crutches. A real danger lies in the over-attachment to and dependency upon the therapist that easily develops when hypnosis is used. A doctor

cognizant of this disadvantage, however, can minimize it.

Another danger is the breaking of vital resistance which may lead to a flooding of the patient's personality with an amount of anxiety, guilt feelings, and depression which if brought into consciousness will threaten his ego. On the other hand, material which might seem taboo to the therapist might be in reality very close to the patients realization. This lack of resistance may prevent the therapist from attributing true values to his information.

The patient represents a more or less atypical appearance under hypnosis due to the absence of many inhibiting mechanisms. He loses certain aspects of his personality which tend to give the therapist a wrong total picture of the patient's problems. For example, a person under hypnosis might reveal extremely aggressive features which normally are fairly well balanced by mechanisms which control the aggression. The therapist using hypnosis therefore might tend to focus the interpretation on this aggressiveness rather than on the more important and fundamental factors producing it. Under normal conditions, this error might be easily avoided.

A further danger to be mentioned briefly is the tendency to push patients along in their therapy too rapidly. We know that certain psychic adjustments and developments need time to form and adjust. Unless the therapist takes care and observes his patient closely this time is cut short when hypnosis is used and the therapeutic effect annulled.

There are few procedures in medicine which do not have their dangers and disadvantages along with their usefulness and value. Hypnosis is a valuable therapeutic tool in the armamentarium of the psychiatrist in the treatment of acute situational maladjustment reactions, and the disadvantages and dangers as discussed in this paper can be avoided or minimized if they are but kept in mind.

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EXPERIENCE WITH GROUP PSYCHOTHERAPY AS A METHOD OF TREATMENT FOR VETERANS[1]

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In this report it will be claimed that there are certain advantages in group psychotherapy within the military setting. Soldiers live in a group; only when they are wounded or break down mentally, do they suddenly become individualized again. The moment they are better, meaning when they leave the bed, they form a group again. This group formation is characteristic in all phases of military life. In the hospital it becomes an emotional experience and already as such it is of therapeutic benefit and may be utilized in group psychotherapy.

There is one other reason why group psychotherapy offers special advantages in the military setting. This reason is to be found in the special attitude of the soldier-patient to his army physician. In the person-to-person interview the enlisted man sees in his physician the officer. He tries hard to relate himself otherwise but can hardly do so. The bitterness of the average enlisted man to his medical officers and nurses is out of all proportion to reality. The soldier unconsciously demands love, attention, dependence and indulgence. In the physician he meets a father who is not forgiving but demanding. The physician demands the one thing which the child cannot deliver: to grow up in a hurry. In this situation of distrust and negativism patients in a group react differently from the individual. If the physician talks to a group of patients then this group, so to speak, forms a board, to use the military term. The physician in that situation is not the president of the board but the man before the board. The board proceeds to form its own independent judgment concerning his qualifications. If the physician resents this he should stop right there. If he accepts the challenge he must now convince the board that he is all right. In a group the individual patient feels protected therefore less defensive and can more easily develop a feeling of confidence toward the physician.

The group as described in this paper was formed by 25 patients, all former combat soldiers returned to the States after having been diagnosed as severe and acute anxiety states. This first meeting was arranged on the day of their admission for the purpose of orienting the patients in the new hospital and, at the same time, the meeting was supposed to establish a friendly relation between the group and the physician.

After the first meeting the group was not called together for 2 weeks, during which time the men lived together on the same ward and were worked up for the board meeting. The group formation was kept alive by the morning rounds which had the character of a sick call. The patients saw their physician at work and were willing to wait their turn.

During this period—the first 2 weeks in the hospital—the structure of the group, if not the group as such, changes. The single element is no more the patient, but the patient and his visitors. If the physician now gains the confidence of the visitors the game is won. Here again the attitude of the ward officer is all important. If he considers the visitors thieves of his time he does better not to see them. If he *sees* them he will be amazed to realize how ready they are to work with him; they do not have the soldier's ingrained attitude of suspicion against rank. On the contrary, they usually see in the person of the doctor the personification of special privilege: the doctor has the power to "give them back their man." Even while dealing with relatives the patient-group can be knitted together more closely when the relatives are also seen in groups. This can easily be arranged by daily rounds during the visiting hours. This costs less time for the physician than individual interviews. The doctor who comes spontaneously may also evaporate without further notice. Besides strengthening the foundation for later group work the physician gains priceless information. I did not realize before how much a psychiatrist can learn to use his eyes and how the eye can support the spoken word, for instance

[1] Read at the 102nd annual meeting of The American Psychiatric Association, Chicago, Ill., May 27-30, 1946.

by simply seeing a mother and her son sitting together holding hands.

If we return to the discussion of our typical group of 25 simultaneous admissions, we note the next stage of group formation. This stage has not been fully utilized for that kind of therapeutic method which is commonly known as G.P.T. Such treatment should not be started before the group is even more mature. The patients have been admitted on the same day, have lived together on the same ward for approximately 2 weeks, have been worked up individually and are now ready to be presented to the CDD Board. Meeting the board finally is again as much an individual experience as it is an event in the life of the entire group. It so happened that all the patients here were discharged from the Army.

Receiving the certificate of disability discharge alone has only limited therapeutic benefit. This statement is by no means self-evident. Too many physicians, including psychiatrists, think that all a mentally sick soldier wants is his discharge papers. After he gets what he wants he is supposed to quit this mental "sit-down strike." It should be evident that the patient still needs to learn how to work and to adjust again. The CDD symbolizes for the patient the close of a chapter in his life. Now he has to start a new chapter. In this period of his army career the soldier feels like a free man again, and to get well assumes a new meaning for him. It no longer means for him to stay in the Army. It means now to be discharged from the hospital to go home and to start living again. In this last period he is ready to believe in his physician again. While going through the process of being discharged he realizes that finally somebody has *done* something for him. This is now the right therapeutic moment to call the group together for the start of group psychotherapy proper. The patients are now veterans and that should make this report of special interest.

I found it advisable not to confuse the men by offering them too much liberty in the beginning. They feel more free within limits than when suddenly let out of bounds. For instance, I never tried to be the leader but I never denied being the "central figure." I made sure that the attendance was voluntary but nobody was allowed to come too late. I found it very important to be consistent myself. The meeting was held without fail, preferably at the same time and at the same place.

The doctor and patients start almost every meeting with a resistance. The doctor looks for reasons to postpone the whole thing because it is a test of all of his abilities each time. The patient rationalizes his resistance by remembering his bad experience "with all lectures."

In these meetings I did not apologize for being an officer; the men see that only too clearly anyhow. On the other hand, I tried to be different from the type of "Brass Hat" and the tough physician of their imagination. My main goal was to secure the *emotional* participation of the men. *Intellectual* participation is easy to get and useful as a start, but the real therapy begins only when the emotional issues are brought out. The physician must avoid, on the whole, being an instructor or lecturer. In case the situation becomes "too hot," he may become a moderator. The great danger among a group of soldiers is a degeneration of the session into fruitless griping. Of course griping should not be stopped; calling a halt to it would simply stop everything. It gives the physician opportunity to present one of the most important interpretations to returning veterans: to use their own words, "not even Jesus Christ Himself could satisfy them with His unending love." A patient once got up and told of how he had lived for 29 months as a prisoner of the Germans, how he grew to *like* the Germans and how disappointed he was in England over his welcome and how he "blew his stack" when returning to this country disgusted with everything. The man would not have had a chance to talk so long if he had not brought out in an exaggerated way what everyone else felt to a lesser degree. This was a right moment to give the interpretation: the patient began to "like" the Germans (who threatened to shoot him at first) because after all they did not kill him during the long time of being a prisoner. He began "to dislike" his fellow Americans because they did not help him to realize his dream of freedom. The thoughtful silence of the group after the right inter-

pretation is given at the right moment and in the right transference situation is like the silence of acceptance in psychoanalysis. It is quite different from the embarrassed silence of resistance while everybody waits for the session to get into gear.

In highly emotional sessions "magic cures" may happen occasionally. This is not the purpose of the meetings but a by-product only. Once a sergeant with an hysterically paralyzed hand, paralyzed for seven months (so far resistant to all therapy) got up, in the heat of discussion shook his fist and gesticulated with his hands in an almost provocative way. To call this fact to the attention of the patient or the group would have been a mistake at this moment. It would have been tactless. The man would have felt "caught" as a malingerer. He would have gone far out of his way to prove again that he was still sick.

On another occasion a soldier with an hysterical bent back got up to his full height of six feet, gave a piece of his mind and then slumped back. Both men improved rapidly afterwards. Both cases were used later, in another group meeting, to interpret the psychodynamics of hysteria. The sergeant had developed the paralysis of his hand while bringing up ammunition to his men pinned down in front of a Japanese road block. He was under heavy fire and just before getting hit, his last thought was: "I would give my right hand to get out of here alive." He got out alive but sacrificed the further use of his right hand. In the case of the hysterical bent back the motto of the soldier was simpler. He thought, "The Army took me from my farm and made me an ammunition carrier; I can't take it. The Army broke my back."

There was a second reason why the occurrence of such "magic cures" was not mentioned and remained unrecognized by patient and the group. The men should not expect the meeting to be a show. This would push the physician into the rôle of an entertainer and soon he would be bound to disappoint his patients in this respect.

As a rule the beginning of the hour is its most difficult part. I learned early that the seating arrangement is important. Invariably every patient seats himself as far as possible in the background. In this way he indicates that he is not a patient, not even an onlooker or participant. He wants to show that he just happened to be there because he had nothing better to do. To ask him to move would only antagonize him. It is, however, proper to make a remark to that effect. Such a remark is an interpretation of his resistance. Then the mountain should come to Moses and the physician should go to his patients. This move has the additional advantage that the few psychopathic show-offs who park themselves directly in front of the physician are now in a more appropriate position. The physician, by the way, who is sure of himself will not mind losing a few minutes each time by discussing out-of-line topics brought up by incident. The same physician also will not have to worry seriously about disciplinary difficulties. The group takes care of that very efficiently.

To overcome the initial resistance of the group I usually took it upon myself to get the group started. None of the men wants to start, because at that moment he would lose his group status, and this protection he needs badly. In other words, the group has to be started actively. With some feeling for the group, this is easily done; "Has somebody something on his mind to get started with?" "There was one question left over from the last time"; or a seemingly out-of-the-way approach, "Did you see the movie last night in the post theatre?" It has been my experience that insurmountable group resistance is always due to some resistance in the person of the physician. There is such a thing as group resistance but it can be analyzed with relative ease. The group may get furious about some new rule, restriction, unfairness or frustration and a direct question will disclose the source of trouble. If nothing happens and the physician begins to "sweat it out" there is an obvious reason: the physician, as a rule, has too much to do otherwise and so he simply does not feel like conducting G.P.T. If he has many new admissions on his ward he wants to get them started, otherwise his ward is "loused up" for weeks. The group may take care of itself. *The physician should always be conscious of this fact.*

Report of Experience in a Four Weeks Period of G.P.T.

I shall now report briefly 12 group meetings covering a period of 4 weeks. The participants were 25 enlisted men all diagnosed as acute severe anxiety states. They were all former combat soldiers and all had met their board and were going to receive an honorable discharge for "physical disability." In other words, they were veterans in the making. They had been hospitalized in their last hospital for approximately two weeks before the start of G.P.T. proper.

First Week, Meeting No. 1.—As an introduction, it was mentioned that all men had been participating in "bull sessions" and that it might be a good idea to have such sessions regularly together with a psychiatrist. The one question uppermost in everybody's mind was probably, "When do I get out of here and when do I go home?" Reassurance was given that so far everyone has gotten out and gone home and that there was very little to do but wait for the date to arrive. It should be tried in the meantime, however, to see what could be done in the form of assuring everyone of "a fair deal" after his discharge so that they might make the new start as little handicapped as possible by nervousness. One of the first questions asked concerned having children while being considered "a mental case." In the discussion that followed the great anxiety of everyone was brought out almost immediately concerning "insanity" and the "black mark" of having been earmarked as an "N.P. case." This anxiety is uniform, quite intense and as a group reaction overshadows any individual problem. The interpretation was repeatedly given that a "nervous breakdown" is not necessarily proof of weakness or failure. At the same time it was pointed out that behind the sensitivity and shame of being diagnosed as a psychiatric case and the shame of not having lived up to the demands of combat, stands the anxiety of not being able to become a fully efficient person again. In this connection it seemed to be important to let the men tell long stories that "even officers can break down, and how!" It was emphasized that a nervous breakdown was not something that happens to everybody but that it is something that just happened to everyone in this group. Finally two men told the story of their breakdowns before their original hospitalization 3 months ago. Neither had told it before. These stories showed the men that heroes may break down too.

During this meeting the problems were stated. The main anxiety was clearly an anxiety and shame of being mentally sick and uncertainty about how to get started again. The anxiety was made conscious and freely discussed. *It was not eliminated but activated.*

Meeting No. 2.—In the 2d session, 48 hours later, the topics were the hopes and expectations concerning going home: "Will we be bothered by nightmares, trembles, irritability, heart pains?" "Will I get into a fight with my children, my wife, my boss, my customers?" The discussion was carried on by some of the men who had been on sick leave and reported about it in rather bitter terms. The fear of impotency was surprisingly strong. The interpretation given at the end of the hour was a repetition and summary of discussion of the remarks which had been made during the session. For the men overseas, home became a kind of paradise lost. For the veteran it became sober reality again. The point was illustrated by the prisoner of war, mentioned above, who told his story and who discovered kind feelings toward his captors and strong feelings of antagonism toward his fellow Americans.

During these two sessions of G.P.T. a change in the discussion was noted, from a concern about being sick to a concern about being reconverted to health. Much of the time in later discussions oscillated between these two points. Similar interpretations were given, illustrated according to the material produced in the group sessions. The process of working through the main anxiety had started.

Meeting No. 3.—In the 3d meeting an enormous amount of feeling was released by discussing the waste of time while in the Army. During this first week an interesting by-product of group psychotherapy was noted. The number of soldiers reporting for sick call during the morning rounds on the ward dropped sharply. The soldiers got the attention they needed in the more socialized form of the group experience.

Second Week—Meeting No. 4.—A psychopathic-looking individual, immature and provoking, obviously asking for trouble, stated flatly that he did not expect to find any kind of employment because his discharge papers would show his N.P. diagnosis. In a belligerent way he claimed that the Army had "ruined" him by earmarking him for the rest of his life. As a reply some remarks about the discharge procedures were made. Remarks of such a technical nature are respected by the men because they show them that the doctor "knows his business." Then there was a silence, expressing a disapproval of the provocateur. The group did not want to be identified with him. It was, however, fair that nobody's cooperation should be rejected, least of all the cooperation of a paranoid psychopath. Since he had the appearance and behavior of an exhibitionist, he was offered, without making it obvious, a chance to tell his story more in detail. The advantage of such exhibition for the group is obvious. Precautions have to be taken however not to hurt the feelings of the exhibited specimen. This can be easily done by making him feel as the appreciated counterpart of the central figure, the physician.

The man told the story of his erratic life going back to his school days. He was the youngest of a large family. While in combat he could not take it anymore, he broke down and became "the baby of the family" again. This time he did not wish

to be taken care of by the mother in preference to his 7 older siblings but by the Veterans Administration in preference to his healthy brothers.

In this hour a practical illustration was given of "understanding psychiatry." Besides some individual clues, the general lesson derived at was: a reasonable sounding complaint against the Army may sound less reasonable when looked at more closely. The group began to meditate and to think.

Meeting No. 5.—The topic of the 5th session centered around the question: "Is it good for us to talk so much about the war with our buddies and our wives?" During this and preceding hours the group actually got trained in working through their anxiety.

Meeting No. 6.—The meeting had a slow start. Some questions were asked about possible differences between a nervous breakdown in civilian life and in military life. Most of the men were convinced that "this" would not have happened to them in peacetime. This question was left hanging in mid-air when a young, sensitive looking little chap got up and said that he had heard voices while overseas and asked whether this means insanity. There was something simple-minded in the way he talked and at the same time something pitiful and moving. Everyone felt it, no one laughed as so often with other questions. A deep concern and almost motherly attention was expressed by the group for one of its youngest and sickest members. The patient was again singled out of the group but not in a hostile way as in the case of the rebellious paranoid psychopath. The group turned toward him like one man with a silent and helpless question: "What now?"

In an almost tender way he was asked whether he was still hearing voices. To the general relief he said no. He then continued in his simple way to talk: he was young and unmarried, he was overseas only a short time, he did not feel he had done his part and he felt like returning to duty. At the same time he did not want to hear voices again. At this point the discussion was slowly taken away from the group. His hallucinations were declared to be a matter of the past. It was outlined that they were the patient's own thoughts, felt on the outside. The boy then continued to say that he would have liked very much to return home from overseas and that one day he simply thought his father would come or maybe the President of the United States would arrive in the harbor to take him home. The man finally stated without complaint, that the CDD Board had decided to send him back to duty and in a matter of fact fashion he said he now wanted to know whether that was the right decision. The group was asked for a vote. Unanimously it was decided that he should be sent home. (The patient later was boarded again and was discharged from the Service.) The hour was now past but after the group meeting the men were given a chance to stick around in an even more informal interview and to settle more personal questions in a smaller group of three or four persons. This technique of "marginal interviews" proved to be very useful. The physician has to watch against men saving their bacon for "after the hour." If it appears that such behavior is a form of resistance toward G.P.T. it can be brought back into the group meeting with the remark: "Let's start the next time with your problem."

The inner meaning of this hour was something like this: We do not need to be afraid of anything in these discussions. We can talk even about hallucinations and we may find out that there is nothing so horrible as it looks in the beginning.

Meeting No. 7.—At the end of this meeting it was felt advisable to drop a hint that such things as getting money for an incapacitating sickness existed and that these problems belong before the group for discussion. The next hour will show an unexpected comeback of these problems in disguised form.

Meetings Nos. 8 and 9.—Someone got started on the question of goldbricking, malingering, being yellow, faking. This topic caught fire immediately and the men hardly waited for each other to finish telling hair-raising stories: "My buddy was diagnosed as a goldbrick and died the next day." "No doctor gets up in the middle of the night." "I was operated on by a doctor who was drunk and had to be relieved in the middle of the operation." "My nurse put me in isolation because I wanted to smoke." "If I ever go to a doctor again I will make sure he was never in the Army." There was no trace of the usual separation within the group of people in favor of or against the topic of discussion. It was a people's tribunal. It was felt that things should take their free course. In the first place the men obviously needed to get their stories out and they needed some emotional catharsis. In the second place they needed the proof that they could make these highly disrespectful accusations unrestrained. Either the promised freedom of discussion was to be true or the whole thing was a fake. During the last ten minutes the physician took over and interrupted with a statement and a question: "I am surprised about this bitterness of all of you toward your doctors and nurses. I did not think that it was that bad." I then continued to say what I thought of "malingering" as a diagnosis. It is my opinion that at least as far as the patients in this hospital are concerned this diagnosis was almost always a mistake. I went so far as to claim that the qualifications of a psychiatrist can be judged according to the frequency with which he makes the diagnosis "malingering." The less the psychiatrist knows the oftener he will think that he "caught someone faking." Then I asked whether the patients liked chaplains or Red Cross workers better. The situation changed immediately, everyone stating that chaplains and Red Cross Workers are far superior to doctors and nurses. At the end of the meeting the following interpretation was given: Sick men become somewhat like children who want attention, love and help from the doctor-father and the nurse-mother. These parents cannot give the demanded love because it is their function to make the children grow up and

fight again. The function of chaplains and Red Cross Workers is different and uncomplicated by military demands. They can accept the children as children before God. At the end of the interpretation I made a personal remark and said approximately: "I do not know how I would behave if I were working with soldiers behind the front lines."

In analytic terms it could be said that the transference situation of the group was clarified in its obvious negative and its latent positive aspects. It must be noted that the original attempt to talk about compensation neurosis was not followed up and that this topic was never brought up for discussion. However, in the discussion concerning doctors this topic was implied with the term "goldbricking." All these meetings took place in November and December, 1944, and at that time practically no case of compensation neurosis was seen. To get out of the Army was all that the men wanted in the form of compensation. The picture changed only slightly after V-E Day.

Fourth Week—Meeting No. 10.—During the 10th meeting, the very important question was raised: "Was the whole army career a failure?" This question was vigorously discussed and the physician intentionally kept back his own opinion. It was felt that this question was too important to be finished in one session, that it should be mulled over in the minds of everyone for a while longer. With this question a new chapter was started and should not be closed too soon.

Meeting No. 11.—The 11th hour was devoted to a kind of "information please" program. Hours like this are not wasted if they do not occur too frequently.

Meeting No. 12.—With some hesitation and with some mixed feelings the old question, the theme of the 10th hour, was introduced again: Was it all a failure? Was the life in the Army all in vain? My hesitation to talk about this question was due to my desire to avoid anything that would look like a last minute pep talk. Neither was I sure how the men would react. It was possible that they would reject the whole army career as a waste of time. The meeting was as different from the usual run of meetings as the "information please" session. It was more a talk *to* them than a talk *with* them. It was, however, not an impersonal affair. All the information gathered in 3 years of army psychiatry was utilized: How people are disillusioned, bitter, resentful and sick, how they also are more realistic, how the war experience was new to their character and upbringing, how it could be used as a socializing experience, how it could be taken as a contrast to the spirit of cut-throat competition and of rugged individualism. Nobody should feel that the years given to the benefit of his country were wasted. It was pointed out that even boredom and weeks of waiting can teach one lesson: to take it a little easier for periods of time, to sit down and think things over. The interest of the men in these meetings was taken as an example of showing them that there are intangible human emotions which are too easily overlooked in daily life. In the last minute of discussion it was brought out that there is little point in trying to define our war goals. The four freedoms were accepted as describing the war goals as well as any other term. After all we are fighting for the realization of the American dream.

Some Experience With Other Group Meetings

There are a number of problems which were not taken up in these group meetings, as described here. The question of religion was not touched. Another problem not discussed was the enormous bitterness concerning broken promises. The third topic not reported concerns direct political issues. The physician should not be afraid that the group meeting will deteriorate into a political rally. The physician should always go courageously after the emotions and they are often hidden behind the façade of politics.

Summary

The time has not yet arrived to state in terms of psychodynamics what actually goes on during group psychotherapy meetings. What can be done right now is the collection of observations, the reporting of this material and the exchange of opinion. It is fashionable now to talk about the *patient* as a whole. My army experience has taught me to talk also about the *treatment* as a whole. G.P.T. was only a part of such treatment as a whole. Another part of the whole was the previous hospitalization, the chain of evacuation, the admission to the last hospital, the observation on the closed ward, the work up, the board meeting, the life on the ward, the Red Cross activities, the visiting hours, the sick leave, finally the transfer to the open ward and the reconditioning barracks. Group psychotherapy is only a part of this hospital life. During all of this time the men had to adjust simultaneously to different and difficult situations, among them the fact that they were back in the States, that they were considered mental cases, that the war was over as far as they as individuals were concerned, that they were not only supposed to go home but also supposed to get well. It is a difficult and complicated adjustment to make and G.P.T. is a part of this development.

Group psychotherapy offers emotional support to the members of the group by giving them group status before they have reestablished their status as healthy individuals. This group status gives strength to the individual and is felt as reassurance. It is expressed in the feeling of belonging towards the other group members and in feelings of confidence towards the central figure of the group, the physician.

The group develops with greater ease a positive transference to the central figure than the individual soldier with his ingrained distrust for the military physician. This transference can be used to overcome a part of the resistance towards recovery. This is accomplished by the creation of a therapeutic group-optimism, an *esprit de corps* with which the traumatic experience of having been mentally sick and branded as N.P. case may be eliminated. In this respect, G.P.T. accomplishes a reintegration of previously established pattern; more than that it constitutes a new orientation of the personality structure.

In the group meetings a chance is given for catharsis of anxiety, aggression and guilt without danger to the individual but with intensity enough to be of therapeutic benefit. In the discussions which follow almost the rule of free associations, defenses can be tested and modified, interpretations can be given and accepted, insight may be gained and unconscious material may come into consciousness. Interpretations may be given as far as both resistance and unconscious contents are concerned. Inherent in the character of the group meeting is the fact that the procedures remain largely on the level of reality testing.

In group psychotherapy an emotional experience of integrated human group relation is felt; at first, so to speak, the group matures as compared with other groups in the hospital. Later the individual improves. The final integration of the army experience is an ego-strengthening development. This process of socialization is actually experienced in the group meetings by the individual. The traumatic situation of sudden individualization in the beginning of the neurosis is relived in the relative safety of a new and kinder group than the combat team, and brought to a happy ending, which includes the dismissal of the group and the soldier's final return home.

Conclusions

Group Psychotherapy is born out of an emergency situation, out of the disproportion between the number of patients and psychiatrists. Patients could not be seen often and intensively enough in individual interviews but had to be seen in groups. G.P.T. has outgrown its character as an emergency measure and is growing into its own rights and functions within psychiatry.

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THE UTILIZATION OF A THERAPY GROUP IN TEACHING PSYCHOTHERAPY [1]

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The amount of teaching time allotted to psychiatry in most medical schools is not sufficient to give the student more than a sketchy appreciation of the nature of mental illness, its symptomatology and classification. The average internship does not include much training in the management of mental illness, and as a result most physicians enter the practice of medicine incapable of rendering adequate psychiatric service to their patients. Major psychotic disturbances are referred to psychiatric centers but the neuroses, not fully understood, are often mismanaged.

Students and physicians ought to be better acquainted with psychotherapeutic procedures; at least they should be more familiar with the results obtained by psychotherapeutic techniques so that they may treat patients more satisfactorily, or refer them for early specialized treatment, rather than continue the mismanagement so common today. There is little doubt that psychiatric teaching has improved greatly in the last ten years, but newer methods must be tried in order to use the allotted time more efficiently. The utilization of a therapy group in a teaching program offers this promise.

Shortly after we began the use of the group method in the treatment of psychoneurotic patients at the Presbyterian and Philadelphia General Hospitals, interns attended as guests, and they were very much pleased with the understanding of psychopathology and psychotherapeutic methods which they acquired. Some attended regularly and indicated that the sessions had proved an excellent way of learning the fundamentals of psychotherapy. In an early communication on the group method(1) I stated: "Although the group clinic has not been a part of the formal instruction in psychiatry of any class of students, the interns, residents and others who attended have been enthusiastic about its possibilities. At this time when there is need for the rapid training of psychiatrists in the management of the neuroses, the group method ought to be considered in such a program." Additional experience has strongly confirmed this belief.

From the beginning those interested in psychiatry who came to the sessions were very enthusiastic despite the fact that they simply sat in on the sessions as observers, had no contact with patients, and little opportunity to discuss what they observed. About three years ago we were requested by Dr. Gammon, director of the department of neurology, to take over the treatment of psychoneurotic patients in the neurological out-patient department of the Hospital of the University of Pennsylvania. Here students were assigned to observe, and many were stimulated to greater interest. When the neurological out-patient service assumed responsibility for the treatment of discharged service men with neuroses, a special clinic was organized for their treatment on a group basis. Student volunteers were requested, and seniors were assigned to take histories of the men referred. This first group functioned during their senior year, and students attended the group sessions regularly. All reported favorably on their experiences.

With the re-opening of the fall term in September, 1944, volunteer senior students began to attend the clinic. They took histories, conducted follow-up interviews, attended the group sessions, and participated in discussions on the mechanisms of the therapy sessions. With few exceptions the volunteers were regular in attendance and their interest was most gratifying.

Each patient referred to the clinic was assigned to a student who took his history, did the indicated examinations, and arranged conferences with his patient each week before

[1] Read at the 102nd annual meeting of The American Psychiatric Association, Chicago, Ill., May 27-30, 1946.

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or after the period devoted to group discussion. The students participating were mainly seniors in the army or navy medical program and were accepted by the recently discharged neurotic veterans for what they were—sincere, earnest students soon to become a part of army or navy medicine.

Patients enrolled in the clinic were either discharged veterans or men rejected for military service because of neuroses. They were referred by the Veterans' Bureau, the Red Cross, and other agencies. New patients were accepted at any session. Meetings were held once a week and lasted from one hour to an hour and a half. Before the discussion period each week I tried to see as many patients and students as possible and discuss specific problems or answer questions. Because I had no teaching assistants it was impossible to give as much supervision as was desirable, and I could not become personally acquainted with the problems of every patient or lend much assistance to the students in the handling of their patients. Despite the lack of adequate supervision the students acquired some knowledge of dynamics and acceptable psychotherapeutic procedures, and the patients improved.

At each weekly meeting, after the students had spent twenty to forty minutes with their assigned patients, the student-physicians and patients assembled and a group session was held. The patients were encouraged to do most of the talking, but the students were directed to participate, and to ask questions and make comments when the discussion lagged or when they saw an opportunity to direct attention to the specific problems or needs of a patient under their care.

In the early sessions we presented fundamental psychodynamic principles in simple language, and helped the patient and student to understand how disturbance of body function may be produced by emotion(1, 2). At later meetings mental mechanisms such as repression, sublimation, rationalization, projection, introjection and regression were plainly described, and were illustrated by common examples to draw the patient into the discussion and have him indicate his awareness of the working of these mechanisms in himself. It was a surprise to students and physicians alike to discover how readily patients recognized and spoke of their own use of rationalization, projection and similar mechanisms.

After patients acquired a reasonable appreciation of simple psychodynamics, brief histories were presented for discussion. These cases were selected to show the rôle of rejection, over-protection and other experiences in the production of neurotic traits. We have found this very valuable because it is an effective method of vicarious catharsis and patients identify themselves with the experiences of the persons under discussion. As various features of the cases were analyzed by the group, insight into the workings of their own minds as well as that of the person whose case was discussed was effectively obtained. During such presentations patients divulged their problems and life histories very freely, and rapidly acquired an objective attitude toward themselves and their difficulties.

The effectiveness of the therapy sessions was heightened for the patients by the presence of the students. Patients in attendance understood that the sessions were part of the training of the students, consequently comments made by the therapist or students were accepted by the patients as being authentic. During the first year of our experimental use of the group, students were selected in turn to direct at least one session. This gave them valuable experience in presenting their views, but as they were not sufficiently advanced to guide the discussion into proper channels the practice was discontinued in the last year.

It is not the purpose of this paper to present the dynamics of group therapy but to indicate its usefulness as a means of teaching students. By attendance at therapy sessions students have had the opportunity of observing the development of a patient's history as well as the explanation of his symptoms. They have watched the uncovering of repressed experiences, with resulting abreaction during the discussions. They have also had the opportunity of dealing with patients as they began to understand their acquisition of neurotic patterns of behavior, and gradually recognize their visceral symptoms as emotionally determined. During discussion of patients' difficulties students

have been able to observe rationalization, projection and other mechanisms utilized by patients in attempts to protect themselves in the discussion before the group. They have seen how patients were assisted to recognize their use of these mechanisms in such a way that no additionl psychic trauma was effected. In the group they have watched feelings of resentment and flagrant hostilities manifested by patients, and have observed the handling of these situations by the therapist with the aid of the group. Discussion of the situations after the termination of the sessions has helped students to understand what they have witnessed. They have acquired an appreciation of methods used in dealing with the patients during the therapeutic process. The acquisition of insight by patients has been demonstrated to the group, first in its intellectual aspects, and frequently full emotional insight has been observed in patients under their care.

The benefits to students in attendance have been considerable. Before participation in the group sessions few of the students had any appreciation of what could be accomplished for neurotic complaints, and to have them realize that such symptoms as pain, cardiac palpitation, nausea, vomiting, syncope, giddiness, uncontrollable anger and irritability could be improved by psychotherapeutic manipulations was a revelation to many. The attitude of hopelessness in dealing with neurotic symptoms has been dissipated. Most of the students are now able to understand that neurotic symptoms are real and not imaginary. It was interesting to observe the students as they interviewed their patients and felt it necessary to give them some kind of medicine, even though it be a placebo. However, since no medication was administered to any of the patients, students have come to know that these crutches are seldom of value in dealing with the neurotic.

One of the most beneficial effects to these volunteer students has been the awakening of a real interest in psychiatry. Several have admitted that prior to their experience with the group they had little regard for psychiatry, but have since decided that it is a hopeful as well as an interesting branch of medicine. About one-third of those who attended sessions during the two years' operation of the veterans' clinic have decided upon psychiatry as their specialty, and many have already begun their career in army or navy psychiatry.

Comments of some of the students are of interest. One of the most frequent remarks was that this was the first opportunity they had had to work with the neurotic patient on such an intimate and prolonged basis. These students have emphasized the fact that although they heard much about "treating the patient as an individual," they had no practice in doing so and no occasion to observe the handling of patients' emotional problems. Several expressed the feeling that after they had handled a patient in the group they felt it was as much an improvement in teaching the treatment of neuroses as going to the patient's bedside was an improvement in the teaching of clinical medicine. It was common for students to express surprise at the ease with which the neurotic patient was helped to accept his illness as an understandable entity, and how this understanding created hope in the patient. Many were surprised when I asserted that the symptoms of the neurotic were real, and some entered into lengthy disagreement with the viewpoint as to how pain could possibly be established by neurotic mechanisms unless on an imaginary basis. It was an interesting experience for me to observe the skepticism with which many of the students regarded any assurance of improvement in these patients. They were all so thoroughly impressed with the organic side of medicine that it was difficult for them to accept functional disturbance on any basis other than a conscious or near-conscious level. Several expressed amazement that such symptoms as tachycardia, breathlessness, epigastric pain and digestive disturbance could be influenced by psychotherapy. Many were disturbed when their patients were not given some kind of prescription for their symptoms, and some were surprised when patients returned after they had not been given any medication. As the course ended most of them were enthusiastic, and some were quite critical of the great emphasis placed on the psychoses and of the failure to recognize and handle neurotics properly in other departments.

It may be illuminating to quote from a few

of the students' reports. One stated that as he proceeded through medical school he felt the "art of medicine was a thing of the past." He had developed such an intense reliance upon "scientific methods" that he was considerably prejudiced, and it was as "a very skeptical senior" that he "volunteered to attend the Tuesday evening sessions." Of the first session he reported:

> I left the class with a realization that something must be done about the one-sided view I held. My first encounter was with a veteran who had served three years overseas. He seemed acutely ill mentally, and I was completely at a loss as to what course to follow, so I urged him to keep talking. I kept trying to remember what we had been told in our third year—"permit the patient to talk and ask leading questions to direct the conversation along the path you desire."

The student permitted the patient to talk, and suddenly he realized "the patient had apparent confidence in me, despite the fact he knew I was a student doctor" and he, the patient, was anxious to be helped. This experience was unique to the student-doctor because he somehow had a fixed idea that neurotics *liked to stay sick*. Incidentally, this particular patient had a very intense anxiety neurosis with many visceral components, and the student expressed further amazement that marked improvement of these symptoms was eventually effected without medication.

Another student wrote:

> At the end of our lecture courses I had a rough idea of what a neurosis was, but not much more than that. I had the impression that the psychoses, rather than the neuroses, made up the bulk of psychiatric practice.

To this student it was surprising to observe patients—such as he had seen in medical dispensary—with common complaints on a neurotic basis, resistant to all medication, respond to psychotherapeutic measures in the group.

One of the first physicians in regular attendance at the group sessions was an interne at the Philadelphia General Hospital. He had attended regularly during his senior year in medical school and continued attendance as an interne. He is now an army captain doing psychiatric work, and recently wrote me that up until his senior year in medical school—when he first attended the group sessions—he had no appreciation of any curative procedures for the psychoneurotic disturbances. He stated: "As you know, the treatment of the 'neurotic' individual in medical dispensaries was to give them a pat on the back and a bottle of elixir of phenobarbital." He further remarked:

> Observing a group of patients over a period of several sessions impressed upon me far more of the psychodynamics than I had been able to grasp anywhere else—despite the fact that my interest had always been in psychiatry. . . . . Some of my most vivid recollections of group psychotherapy have to do with the hate, fear, explosive antagonism, guilt and sorrow that would unfold like a drama during an evening's session. Having witnessed the handling of these reactions has helped me infinitely in coping with similar situations that I am now meeting.

Other students have commented as follows:

> The group experience teaches in the same way that clinics and ward work teach in medicine. It provides practical experience by dealing with and handling patients—something books and lectures cannot provide. I have learned to believe that every person who is sick has some degree of psychoneurotic overlay, and that handling this is an important factor in speeding recovery.

Another in reporting his experience said: "It caused me to revolt against the physician who damns the neurotic and prescribes bromides."

In presenting suggestions for improvement of the group method of instruction every student favored its expansion, and recommended:

1. Additional instruction which should include more guidance of the student's individual session with his patient.
2. Better training in history-taking prior to participation in the group procedure.
3. Holding of sessions more often than once a week.
4. More discussion and instruction after each group session, that students may receive a clearer explanation of the subtleties of the comments made by patients.

All the opinions of students were obtained shortly before or after their graduation, and all were secured after the termination of their contact with the group.

In addition to the remarks of these undergraduate students, naval officers in attendance have been very enthusiastic in their

comments about the value of the course as a method of instructing them in handling psychoneurotic problems in the services. These men attended for rather brief periods and, as those who have had experience with group therapy realize, in order to understand its effectiveness it is usually necessary to attend many sessions to observe the group inter-action and appreciate its benefits to the patients.

Although this experience with the group as a teaching medium has been rather brief, and the views expressed by the students must be evaluated in the light of their lack of experience and their immaturity, I personally believe that the method is valuable for teaching sound psychotherapeutic procedures to students and physicians, and for making them more proficient in the handling of psychosomatic disorders. For a long time there has been rather general agreement that it is very difficult to teach students psychotherapeutic methods because of the intimate patient-physician relationship which is disturbed by the presence of another individual. In the group method the student can see and observe all of the potent psychodynamic mechanisms employed to effect improvement in the emotionally disturbed. Rapport and transference can be satisfactorily established, and every psychotherapeutic measure seems to be increased in effect in an active group. I have gained much from the group discussions, and have learned how to handle individual patients far better after noting behavior in a group.

In discussing with students in attendance the benefits they derived from participation in the group project, it surprised me to learn that many of them stated they had received invaluable assistance in effecting a better personal adjustment in their own lives. Many reported that they had become aware of the genesis of undesirable personal characteristics which they possessed, and were able to direct curative measures. Several were enthusiastic about this phase of the project and believed it was the only experience through which they had personally benefited in their whole medical school course. When we realize the harmful effect of personality maladjustment in the physician, we can fully appreciate the value of this group training to the medical student.

In conclusion, I believe that group sessions, with adequate supervision, can be used to teach psychotherapy just as satisfactorily as clinical medicine is taught. It gives students the opportunity to interview, examine and discuss cases with their chiefs, and then observe the technique and result. They become participants in a dynamic psychotherapeutic relationship. Group therapy permits the gaining of experience under supervision, and makes the training of therapists shorter and more effective. It gives to all students a better understanding of the value of psychotherapeutic mechanisms, and for many it develops insight into some of their own personality difficulties and gives remedial assistance.

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THE USE OF PRIVATE PATIENTS FOR PSYCHIATRIC TEACHING IN A MEDICAL SCHOOL[1]

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It has been our conviction for a great many years that there existed a critical need for more undergraduate training in psychiatry designed primarily to equip the general practitioner to deal more adequately with the very common types of psychiatric disorders that ordinarily do not require care in a psychopathic hospital. And, further, that the more formal or highly specialized aspects of psychiatry, particularly those dealing with psychoses, should be reserved for the most part for post-graduate training. In spite of these convictions, we found it difficult to satisfactorily accomplish our objective, primarily because the type of non-pay patients that presented themselves as teaching material to the out-patient clinic, general medical wards in the charity hospital, or to the allied state psychopathic unit, were not sufficiently analogous to the types of psychiatric patients known to present themselves to the average general practitioner. For the most part, the chronicity of their illness, their indigent economic status with its concomitant psychiatric hazards, the difficulty in establishing adequate cooperation, assistance and understanding from other members of the family and the various social agencies concerned with the welfare of indigent patients, as well as the futile or indifferent attitude frequently expressed or displayed by consultants from other departments, all seemed to foster an attitude of indifference as well at to create a rather grossly distorted conception in the mind of the average junior or senior student of the common type of psychiatric disorders that they will inevitably be confronted with in large numbers in the future.

It was largely chance or a freak of nature that created a sudden demand for a change in our teaching program, so far as clinical case material is concerned, that led to the almost exclusive use of private patients for the teaching of senior students in neuropsychiatry. In July, 1943, the combination of damage resulting from a hurricane and the critical shortage of labor and material coincident to the war necessitated the closing of the 150 bed Galveston State Psychopathic Hospital that had been utilized for teaching purposes in conjunction with the out-clinic and general hospital, thus creating a rather critical shortage of teaching material. It was under these circumstances that we first resorted to the almost exclusive use of private patients as teaching material for senior students. For reasons that we believe are common to most clinicians and teachers of psychiatry, we had been reluctant to use private patients for teaching purposes prior to that time, except for occasional carefully selected cases for clinical demonstration.

During the past three years, our experience in using private cases for teaching material for senior students has proven to be most gratifying from the standpoint of accomplishing what we believe to be the primary objective in undergraduate training, as well as advantageous from other standpoints. We have found that the manner of utilizing private cases for teaching material for senior students need not differ from the procedure commonly utilized with non-paying patients. Of necessity, the patient as well as the informants are first seen by the clinician to whom the case has been referred. During the initial interview, the diagnostic and therapeutic importance of an adequate and detailed history is stressed and it is made clear to the patient and/or informant that this history will be elicited and recorded by a senior medical student, who is soon to become a physician and will have proper respect for all confidential data given him.

[1] Read at the 102nd annual meeting of The American Psychiatric Association, Chicago, Ill., May 27-30, 1946.

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Specific appointments for history taking and examination are arranged. In the daily conference with the group of senior students assigned to the service, the data obtained in the initial interview as well as information furnished by the referring physician are given to the group and one student is assigned to the case. On the following day, in the daily conference, the student presents his history, findings of his neuropsychiatric examination, formulation of the case and/or plans for further study. These findings, along with an outline of treatment and prognostic impressions, are then discussed by the resident staff. These conferences are very informal and the students are encouraged to raise questions for open discussion. Daily follow-up is made by the student assigned to the hospital cases in conjunction with the resident staff and clinician in charge. Less frequent follow-ups are made in the average case treated as an out-patient. The group of senior students, which varies from 6 to 10 in number, is assigned to an average of 10 to 15 new patients each during their three weeks of full time assignment to this service with private patients. Each group of senior students also spends half-time of an additional three week period working in the out-clinic for indigent psychiatric patients just prior to their assignments with private patients.

In previous publications (1, 2) the need and advantages of a private psychiatric unit in a general hospital have been described. During the past three years, these advantages have been further emphasized by creating a mass of highly desirable teaching material for medical students in a general hospital atmosphere rather than in the isolated atmosphere so common to most state or psychopathic hospitals. Our offices are conveniently located in the private psychiatric unit, which is a part of the general hospital used for teaching by other services and the physical arrangement is such that the senior students use our private offices for history taking and examinations.

Because of the surprising ease with which such a program for teaching could be established, we were prompted to inquire into the source of teaching material for senior students in other schools throughout the country. Replies from 59 representative schools revealed the following data:

No private patients used	28
Selected private patients used	27
All private patients available used	4
Exclusive use of private patients	0

Reasons for not using private patients for teaching included a lack of proper hospital facilities, the belief that adequate teaching material was available in non-pay patients and the belief that private patients or their families would object to such a procedure. These schools using selected private patients as well as those using all available private patients had experienced no objection to their use.

Following is a tabulation of all of the private patients assigned to senior medical students for study during the year of 1945. This includes private patients that were treated on an out-patient status as well as those hospitalized. Less than 1 percent of all patients referred presented problems of a nature such that students could not be assigned to their cases.

It is evident from the above data that the commonest type of psychiatric problem assigned to the students during the year is the commonest type of psychiatric patient (psychoneuroses 30%) that he will be confronted with in his future practice. Equally significant, and not evident in the statistical data, is the fact that a high percent of the psychotic patients presented mild or acute reactions that are amenable to shock therapy and are not commonly available for teaching material in the average state or psychopathic hospital. An estimated 40 to 50 percent of the depressive reactions (psychotic depressions) represented very mild to moderate disturbances in patients who frequently presented themselves with somatic complaints. This relatively common group of disorders which is very often misdiagnosed by the average general practioner, has served a most valuable teaching purpose primarily because of their rapid and favorable response to electro-shock therapy. The effective treatment of such cases on an out-patient status has served to significantly impress the average senior student with the need for a knowledge of psychiatry and that all mental disorders do not constitute chronic conditions requiring pro-

Diagnosis		No. of cases	Percent of total psychiatric cases
I. Psychoneuroses		373	30.00
Anxiety	176		
Hysteria	108		
Obsessive-compulsive	38		
Reactive depression	21		
Unclassified	30		
II. Manic-depressive reactions		343	27.65
Manic	33		
Depressive	310		
III. Schizophrenic reactions		239	19.23
IV. CNS lues		51	4.10
V. Miscellaneous delirious reactions		25	2.01
VI. Bromide intoxication		10	.84
VII. Psychoses with cerebral arteriosclerosis		23	1.85
VIII. Psychoses with cerebral trauma		16	1.05
IX. Senile psychoses		5	.42
X. Psychopathic personality		123	9.90
XI. Simple adult maladjustment		14	1.15
XII. Behavior problem		22	1.80
XIII. Neurological patients		300	100
XIV. Misc. med. and surg. without psychiatric disorder		31	....
Total psychiatric patients	1244		
Neurologic patients	300		
Misc. M. & S.	31		
Total patients	1575		

longed periods of hospitalization. Some 30 to 40 percent of the psychoneurotic group represented primary somatization reactions, who had first consulted an internist or surgeon and were then referred for psychiatric study after the customary physical and laboratory studies had failed to adequately explain their disability. This group, which, for the most part, is amenable to brief psychotherapy, because of the economic, social and intellectual status, constitutes most valuable teaching material for the differential diagnosis of somatic disorders and psychogenic somatization reactions. In our experience, the type of patient rarely presents himself to a psychopathic hospital except in the chronic or calcified phase of his illness and when used for teaching material serves only as a psychopathologic specimen rather than as a patient suffering from an illness amenable to therapy.

The objection might be raised that private patients or their families would resent being practiced on by senior medical students or that they would be reluctant to divulge the personal or confidential data necessary for adequate teaching. Such was our objection prior to the institution of our present program; however, time and experience have served to completely invalidate such objections. Medical students that are properly indoctrinated in psychiatry throughout their four years of medical school and who have had an opportunity to work with non-pay psychiatric patients during their junior years are capable of satisfactorily dealing with private patients and of overcoming such objections with the guidance and assistance of the resident and teaching staff. During the first conference with a new section of students, the ethical obligation and responsibility of physicians to patients are reviewed and the student is made to realize that he is a participant in the diagnosis and treatment of his individual cases. When confronted with private patients or informants who are seeking and paying for medical advice and treatment, the history and other data are usually spontaneously furnished in such a manner as to stimulate a sense of responsibility and active interest on the part of the student. The student has already had an opportunity to become familiar with the genuine interest of the referring physician and

this coupled with the confidence placed in him by the informant or patient serves to actually create a demand for interest on the part of the student. In our experience, it has been difficult to establish such a sense of responsibility in students working with non-pay patients. Students as well as informants and patients know that the history and observations recorded constitute an important part of a permanent medical record and this further stimulates interest as well as a need for accuracy and thoroughness.

During the past three years, our experience with the use of private psychiatric patients for teaching senior medical students has more nearly approximated the accomplishment of our primary objective in undergraduate teaching than any other method that we have used or know to be used in most other medical schools. In addition to the previously mentioned advantages, it has afforded the students an opportunity to observe a more liberal interest on the part of the various consultants from other services; a very active private patient-physician relationship; the significance of social and economic factors involved in private practice and therapy; and finally the gratifying results that can be obtained by active treatment in the type of patient that he will be confronted with in the future. It is our belief that the teaching of psychiatry to senior students in the atmosphere described above serves to stimulate an interest and create an attitude that cannot be adequately accomplished by the use of non-pay case material alone. The re-opening of the 150 bed Galveston State Psychopathic Hospital in January of this year has furnished what would ordinarily be accepted as adequate teaching material in non-pay patients; however, the program of teaching senior students described herein has proven so satisfactory that it will be continued and the case material in that hospital will be used for sophomore and junior students.

Such a program of teaching has proven advantageous not only to the senior student but also to the medical school and teaching staff. The ever presence of inquisitive students demands increased acumen on the part of the resident as well as the teaching staff and affords the students an opportunity to learn more from an actively practicing part-time teaching clinician.

SUMMARY

It is our belief that the teaching of undergraduate psychiatry should be directed toward equipping a general practitioner to satisfactorily deal with the most common types of psychiatric disorders that ordinarily do not require care in a psychopathic hospital. A means of accomplishing this objective by the almost exclusive use of private patients for case material during the senior year has been described.

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PSYCHOTHERAPY FOR THE GENERAL PRACTITIONER: A PROGRAM FOR TRAINING

Post-Graduate Education [1]

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I prefer to limit my comments on post-graduate education to one aspect: the education of the general physician in simple principles of psychotherapy and to describe a fascinating and profitable venture in this area of teaching recently completed in Minnesota.

Is there any hope that the practitioner can be taught in a relatively brief fashion simple and effective principles of psychiatric understanding and management of everyday problems of medical practice? This was the question which confronted a group of teachers who ventured forth to the University of Minnesota the first two weeks in April of this year to conduct an experimental and pilot course to test the feasibility of this kind of educational program. The results obtained were so startling that we are convinced the answer is in the affirmative.

This course had its inception at the Hershey Conference in February 1945 at which time a group of medical and psychiatric educators drawn from civilian and military life met to discuss the broad problem of veterans' care. One outstanding fact emerged from that three days of discussion, namely, that the need was vastly beyond the limited number of psychiatrists available to meet it. The only hope, therefore, for adequate treatment of these war-created emergency disabilities, entirely aside from the large numbers of psychoneurotically disabled civilians, lay with the 185,000 practicing doctors of America. Most of these are little or not at all equipped by our usual educational procedures to comprehend or manage the problem. The time seemed right. There were already indications that practicing doctors wanted such orientation. In West Virginia and in several other states half the doctors questioned by the state medical societies as to tneir need for graduate education asserted their preference for additional training in psychiatric principles.

The Commonwealth Fund undertook to organize and finance an experimental course. Several all-day conferences were held in drafting preliminary plans. Content, methodology and time limits were finally agreed upon by the teaching staff and others who had been invited to share in the planning.[3] Two weeks before the course began, a final all-day conference was held at which time agreement was reached as to the essential aims, content and procedures to be employed during the two weeks training period. It was realized that the teachers must work as a team, must advance from step to step through conceptual presentation, and must gear their teaching and terminology to the simplest level of everyday medical language. They were prepared to modify the course as indications arose and indeed such plasticity became imperative as the teaching developed. As it turned out, frequent representation of basic concepts was necessary, although couched in different language and using various analogies. The instruction was to be oriented to the everyday problems of medical practice with particular emphasis upon the

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[3] List of Members: Miss Eleanor Barnes, Mrs. Katharine Wickman, Drs. Walter Bauer, Douglas Bond, Henry Brosin, Donald Hastings, M. Ralph Kaufman, John Murray, Thomas Rennie, John Romano, Cecil Watson, Harold Wolff. Dr. John Whitehorn and Dr. George Stevenson contributed to the planning. Dr. George N. Aagaard, Jr., assistant professor of medicine, in charge of the medical out-patient department, made all arrangements for the clinical part of the course and selected patients for teaching purposes. Assisting in the clinical teaching was a group of psychiatrists on the staff of the University of Minnesota Medical School: Doctors Reynold Jensen, Burtrum Schiele, Lillian Cottrell, Robert Hinckley, Harold Hanson, Allan Challman, Hyman Lippman.

understanding of the emotional factors at work. The course was limited to the understanding of the psychoneurotic and the psychosomatic responses and to an understanding of the patient as a living dynamic person involved in a disease process. The essential principles to be stressed were agreed upon: the patient-physician relationship, the value and technique of the interview, and the rôle of emotions in the development of personality structure.

It was with considerable trepidation that we assembled Sunday, March 31, at the Center of Continuation Study on the campus of the University of Minnesota, where under the ægis of their Division of Post-Graduate Education we were to conduct the first course of its kind to be held there. A student group of 25 doctors representing the practice of medicine, under varying conditions, in communities of different sizes, had been invited to participate. The 25 students were in the main unselected excepting that they met the requirements of an age limit of 25 to 50, that a certain number of them be veterans, and that they came from backgrounds of solo as well as group medical practice. For most of them, two weeks represented a real sacrifice of time and money and responsibility to their patients. Twenty-three of the group were general physicians or internists, 1 was a pediatrician and 1 a dermatologist. Five were veterans. Three came from the Twin Cities, 5 from cities of 25,000 or more, 7 from cities of 1,000 to 25,000 and 3 from towns of 1,000 or less. Students paid fees for board, lodging and tuition at the rates usually charged at the Center. The period of two weeks was finally agreed upon as the limit of time available by busy practitioners, for purposes of continuity, and as a concession to the available time of the teaching staff.

As the first day wore on, it was evident that much spontaneous interest existed and that students had quickly grasped first principles. By Tuesday evening, it was clear that an extraordinary rapport had developed between instructors and students, and that an exciting and vital intellectual discovery was in process for both students and faculty. By Wednesday evening, with the atmosphere charged with enthusiasm and responsiveness, pre-conceived prejudices and resistances had vanished. By then long "bull sessions" were being held until two in the morning and the quest for knowledge was being carried into the dining room at breakfast, lunch and dinner. By Thursday uncritical acceptance had been replaced by realistic objectiveness and demands for give and take of ideas. Concepts were being challenged. By the end of the first week, there was no doubting the success of the venture; there was ample evidence of enthusiasm and receptiveness. One would stumble upon groups of students in the corridors in ardent "bull sessions." One sat with them at meal times and listened to their evaluation. Whether to faculty, visitors, or observers their comments were uniform: "The most remarkable educational experience I ever had;" "This is a new concept of sick people;" "This course has opened up new vistas of medicine;" "The concept of the doctor-patient relationship is a most helpful and at the same time humbling concept." At the end of one week it was evident to the most skeptical that several vastly important goals had been accomplished: a realization that the patient-physician relationship was charged with potentialities for good or bad medical practice; the physician's role had been re-defined; the importance of history-taking was affirmed; ventilation through the interview was accepted as a therapeutic tool; a conviction that endless physical examinations would not suffice as therapy; and an awareness that even chronic patients could be relieved, and touched in a dynamic fashion that made a difference. In short, they now knew that in caring about personal human facts and acquiring some skill and competence in eliciting them, the physician had acquired a new and valuable therapeutic technique. The course might have ended here and there would have been little doubt that these doctors in the future would approach their patients with a spirit of new curiosity and an appreciation of their role as psychotherapists, and that beginning skill in the actual techniques of all but uncovering therapies had been acquired. The second week was planned to consolidate this knowledge and to

provide opportunity for testing these new skills and for measuring how far they as physicians could go in psychotherapeutic exploration.

How were these results achieved? From the beginning, the instructors were convinced that clinical work with patients should be the backbone of the training program. Minimum didactic work was planned. There was to be no more than one hour of formal lecture each day. Students were to be given ample opportunity for small group discussion of pertinent problems arising out of day-by-day clinical experience. The teaching program had to be intensive. It began at 8:30 in the morning with a formal lecture of one hour for the entire group,[4] followed by 30 minutes of open discussion of the lecture content. From 10:30 to 12:00 groups of five students and one instructor met for small seminar discussions of clinical and related problems having to do with current work or experiences from the students' own practice. From 1:00 to 2:30 the entire group met for a general seminar under the leadership of two instructors.[5] At 3:00 the students were at the University Hospital ready to interview patients selected largely at random from the incoming medical out-patient clientele. Each student was assigned two new patients on Monday, two on Tuesday, with the aim that he would have at least one patient that he could follow as intensively as needed, in therapeutic conferences throughout the remaining two weeks. In all 121 patients were seen. The number of individual therapy sessions ranged from 1 to 7, averaging 3. Two evening sessions a week from 8:00 to 9:00 were devoted to the presentation of films and special seminars as requested. Saturday mornings were given over to a review of the week, to case presentations and to unhampered free discussion. With faculty and students living together at the Center, endless opportunities arose ex officio for informal discussion and clarification of pertinent issues. Comradeship and abolition of any barrier between faculty and student quickly developed.

The student group sustained unflagging attention. The faculty members also elected to put in full attendance at all the formal lectures and seminars. Free give and take and total participation permitted a fluid exchange of ideas among the students, psychiatrists, consulting internists, and the two social workers, all of whom were part of the teaching team.

Methodologically, the lectures and the small group seminars proved to be effective methods of teaching. The afternoon large seminar was less spontaneous and took on a somewhat more didactic aspect. The clinical case work proved to be the most effective and revealing part of the experience. Time after time the individual student struggling with the interview situation had the fundamental issues clarified by the brief incisive eliciting of additional facts by his individual instructor who joined him at the end of his clinical hour. Thus he was able to see important psychodynamic material emerge and the emotional factors began to fall into recognized patterns. What in planning had seemed to be a disappointment, that we were unable to provide selected examples of acute anxiety reactions in whom greater therapeutic movement might have been expected, turned out to be an advantage as it provided ample examples of the kind of conditions with which these doctors had been coping for years. Thus it came closer to the run of the mine of the student's own experience. It removed the teaching from the category of specific psychiatric syndromes into the category of emotional factors involved in disease process. There were soon plenty of patients who expressed gratitude for being allowed for the first time to really tell their story, for being treated for the first time as genuine human beings and who experienced the relief that such ventilation assures. The effect of this on the student's optimism for his task was quickly apparent. A few patients carried throughout the two weeks showed sufficient therapeutic response to become objective lessons for the entire student group.

In brief, this is what was given them. Monday morning began with a general introduction, the plan of the course and a preview of what was to follow. The morning seminar was devoted to prepara-

[4] See Content of Lectures appended.
[5] See Content of Seminars appended.

tion of the student for his first psychiatric contact with his patient. A history outline was presented and discussed.[6] It proved to have more reassurance than clinical value. The purpose of the interview and methods of interviewing were presented with emphasis on the student's function as a listener determined to elicit human facts and the patient's attitude toward the facts. The first afternoon seminar was devoted to the concept of the patient-physician relationship in terms of the physician's rôle and the patient's feelings about his disability. With this preliminary preparation the students approached their first patients Monday afternoon. Fumbling, insecurity, and lack of planned approach were soon evident. Individual differences in sensitivity and skill were apparent. The groundwork of success and failure was laid for endless subsequent discussion.

The second and third morning lectures were devoted to a review of normal personality development based upon psychoanalytic dynamic insight. Major stages of development from infancy to maturity were systematically reviewed in simple and non-technical language drawing heavily upon concrete illustrations from everyday experience as parents. In discussions following these lectures considerable curiosity was shown by the students in the problems of pediatrics and child care. That some personal anxieties were stirred up was evident in the student who asked how to correct the habit of thumbsucking in his own child, who upon questioning turned out to be five and a half months old. The Wednesday and Thursday afternoon sessions dealt with specific techniques of psychotherapy, the extent to which the practitioner can use them, and the limits beyond which he must not go in the use of uncovering techniques for the eliciting of unconscious material. The Thursday and Friday lectures dealt with the meaning of psychoneurosis, the purposiveness of symptoms, the need for systematic steps in diagnosis based upon positive evidence of emotional imbalance, and a simple presentation of the concepts of repression, regression, and reactivation of earlier patterns of response. By Saturday of the first week when the time came to sum up, many of the students listening to patients, asking the clumsy but essentially pertinent questions, hearing them talk as some of them had never talked before, had felt the excitement that comes when for a moment one simultaneously knows and feels the dynamic quality of human relationship. As doctors they had come alive for patients; their patients had come alive for them. The instructors were exhilarated by quicker responses from the students than they had dared hope for. It was evident that something profoundly important had opened up in the personal and professional lives of the student group.

The second week was devoted to steadying and strengthening by actual experience the students' understanding of the possibilities and limitations of psychotherapy and its relation to physical medicine. The first and second lectures of this week dealt with anxiety as a major source of psychoneurotic difficulties. The psychology of acute illness was taken as a starting point. Anxiety was presented as an aid in mobilizing the defences of the personality. The anxiety of the psychoneurotic was presented as a response to conflicting forces within the personality when the ego is no longer able to hold opposing forces in check. The common defences against anxiety were defined and enumerated. Afternoon seminars were devoted to a continued discussion of psychotherapy and to specific psychoneurotic mechanisms. Evening sessions on Monday and Tuesday dealt with problems in which the students had asked for help; the value of shock therapies, sex education and marriage counseling, etc. The morning of the ninth day was devoted to a discussion of common psychopathology as it keyed in with the doctor's familiar experience in everyday practice. Some indications were given of the serious developments that might arise in states of depressive and schizophrenic illnesses. Psychopathic personalities were defined. The afternoon seminar of Wednesday was devoted to understanding of war-created disabilities. Thursday and Friday mornings were devoted to a concise and specific presentation of the physiological functions that are affected by emo-

[6] Copy available on request.

tions, with concrete material presented in terms of research findings from the field of psychosomatic medicine. The remaining afternoons were devoted to case presentations and general therapeutic procedures were clarified and defined. The last morning was devoted to a review of specific cases that had been under treatment and a general summing up of the experience of the second week.

It is too early, of course, to give any final statement as to the ultimate efficacy of this course. It is planned to conduct a follow-up survey, preferably in person to person contact, at the end of six months to make some evaluation of the extent to which these men practice medicine in a different fashion. At the end of the course the students were asked to hand in a written evaluation which they could sign or not as they chose. Their responses were heart-warming, appreciative, enthusiastic and full of commendation. These are representative samples of their comments:

> This has been a most stimulating and satisfactory course. I feel that it has increased my interest in the whole subject of psychosomatic medicine and psychiatry and has made these subjects much more live and real than they were before.
>
> During these past two weeks I have gained a new concept of people in their relation to illness. This has been a most valuable experience because it has opened up a new limitless horizon which will have far-reaching effects upon all who seek my help.
>
> The course has benefited me personally as now I can keep my own emotions in check and at the end of a hard day will not probably be so upset. I believe now I will be better able to judge myself.
>
> This course has been most effective in enabling me to better handle my chronic cases. I have no illusions that I will be able to "cure" a large percentage of patients that come to me with emotional complaints simply by using the psychotherapy we have been taught to handle in this course. A few I will help tremendously; many I will not be able to reach at all. But with all of them I will be more comfortable.

The students' constructive criticisms were equally valuable: not enough time for reading;[7] a request for an immediate transcript of the lecture and seminar material in order that they can keep fresh and advance their knowledge by reading; a suggestion that in the future students be required to do certain basic reading before coming to such a course; a better utilization of the discussion period of the afternoon large seminar, that it be not wasted by a few individuals with relatively irrelevant questions.

We believe that the course answered two main questions: (1) many doctors in general practice are ready and receptive for such orientation; (2) the job can be done. The task that now lies ahead is to make available this kind of graduate education to many who can surely profit by it. There are plans to provide the content of the teaching material in book form as soon as possible; to prepare a full manuscript on the methodology, difficulties and successes. Limited time of presentation precludes my giving recognition and credit to all those who participated in the instructor group. Without their unflagging zeal, their teaching skill, their whole-hearted devotion to team work, no comparable success could have resulted. For their devotion to the task and their remarkable clarity and simplicity of presentation, I personally acknowledge my deep appreciation. For what I personally learned during the course I will be always grateful.

OUTLINE OF CONTENT OF LECTURES

This outline was meant to be plastic and actually underwent some revision as the course progressed.

1. General orientation
   - Scope, purpose and plan of the course
   - Place of psychiatry in medicine
   - Nature and magnitude of the problem
   - Need for a broader scope in medicine approaching comprehensive medical care
   - Rôle of the general physician in relation to psychiatry
2. Psychiatric involvements in patients as they present themselves in general practice
   - Implications for the patient and for the physician
     - (a) emotions as etiological factors underlying physical complaints
     - (b) emotions in reaction to any illness
     - (c) emotions producing psychological disturbances (neuroses and psychoses)
   - Indications for
     - (a) care by general physician
     - (b) psychiatric consultation or referral to psychiatrist
     - (c) protection of patient and his preparation for referral to specialist

[7] A bibliography was provided, a copy of which is appended. Copies of books and reprints put on the required reading list were provided for the students' library and kept in the conference room.

Recognition of such emotional disturbances through
(a) understanding the complaints and their significance
(b) obtaining a history that includes biographical and experiential material; human relationships
(c) conducting the interview with understanding, tolerance and acceptance
(d) giving patient adequate opportunity to talk

3 and 4. Normal personality development
The life cycle (infancy, childhood, adolescence, maturity and senescence): progression of emotional development
Importance of love, security, achievement, dependency and authority patterns, etc., as influences in personality development and functioning
Sexual evolution: significance for total personality
Situational factors (family-environment-school-occupation-religion) that commonly influence personality development
Constitutional, physical, intellectual factors in relation to personality functioning
Meaning of situation-personality reactions in health and illness: external and internal stresses: disturbed human relations
Importance of inter-personal relationships
Inadequate and distorted personality developments and functioning: how they arise and how they influence living

5. Common psychopathology
Understanding of origin in individual patient as evolving out of life experiences
Broad diagnostic psychiatric categories based on clinical syndromes and manifested in reaction patterns
Dynamic psychiatric diagnosis based on understanding of behavior: that is, a formulation of what is disturbing patient emotionally, how this had developed, and what the patient either consciously or unconsciously is trying to accomplish by his behavior (this type of diagnostic formulation is more meaningful and useful to the general physician than is the usual diagnostic classification; it requires an understanding of the case, not a psychiatric vocabulary
Symptoms of unhealthy emotional reaction patterns
Common depressive reactions
Some extreme psychological reaction patterns
(a) dissociation (hysteria, projection, retreat, somatic illness)
(b) seeking relief in alcohol, drugs, and anti-social behavior
(c) formation of certain predominant characterological traits (compulsiveness, over-conscientiousness, guilt reactions, passive dependency reactions)
Borderline between neuroses and psychoses
Positive clinical data, together with clinical experience, necessary to appraise relative significance of symptoms and seriousness of the problem

6. The meaning of the neurosis
General concepts and dynamics: contemporary stresses reactivate old patterns
Compensatory and decompensatory aspects
(a) based on the individual's need to solve problems confronting him
(b) expressed in behavior, healthy or unhealthy, which satisfies some need
Discussion of good compensation (normal behavior)
Discussion of poor compensation (abnormal behavior)
Neurotic patterns as defenses and evasions: the retreat to earlier less mature patterns of attaining satisfaction
Common defensive mechanisms: their function and variety of manifestation
Reversibility of emotional illness
Decompensation
(a) resulting disintegrative behavior
(b) repetitive—compulsive tendency to reappear
(c) frantic, obsessive self-justifying behavior
Danger of panic from abrupt discovery by patient of unacceptable aspects of personality

7 and 8. Anxiety
A type of reaction between personality and environment which may be either
(a) a healthy biological response to situations if recognized and accepted, or
(b) unhealthy when the situation is not met and the individual is confronted with an overwhelming conflict; this is a common component of disturbed behavior
Anxiety may be
(a) attended with visceral change which is only partly evident (respiratory, circulatory, digestive, genito-urinary, glandular, muscular)
(b) sensitizing when experienced in large degree: carryover of past experience (severe and acute or less severe and protracted) may explain anxiety attacks
(c) disorganizing or disintegrating by reducing the conscious, rational, voluntary element in behavior
Defenses against anxiety may be expressed in
(a) somatic difficulties
(b) conscious or unconscious self-justifying, face-saving, or advantage-gaining behavior
Tendencies of personality facing exaggerated or intolerable anxiety
(a) explosion of anxiety
(b) displacement of anxiety, dissociation (walling off), denial, somatic substitute

(c) regression to infantile patterns of security
(d) disintegrative behavior: breaking up of personality organization
(e) other: projection, guilt, depression, anger, rage, etc.

9 and 10. Physiological functioning as affected by emotions
Common clinical syndromes
Headaches (migraine and tension)
The stomach and bowel (dyspepsias, vomiting, peptic ulcer, diarrheas, constipation)
The nose ("sinus disease," chronic infection, disturbances in secretion and turbinate function)
The heart and peripheral vascular system (fatigue, dyspnœa, palpitation, pain, arrythmias, hypertension, cold and painful extremities)
The joints and muscles (arthritis and myalgias)
The lungs (asthma)
Cutaneous system
Autonomic responses (fever, leucocytosis, sweating)
Accident proneness
Rationale: underlying mechanisms
Organism attempts to maintain physiological balance (and emotional balance) by means of compensations: can be thrown off balance physiologically by disturbed emotions: attempts re-establishment of balance through healthy or unhealthy adaptation and compensation: ineffective compensation results in pathology
Such imbalance of physiological-organ functioning can be manifested
(a) at the biochemical, hormonal, metabolic, neuromuscular levels (partial imbalances)
(b) at the organ level (partial but more extensive imbalance)—gastro-intestinal disturbances
(c) at the level of the total personality (extensive imbalance) anorexia, depression, suicide, etc.

OUTLINE OF CONTENT OF GROUP SEMINAR DISCUSSION

1. Patient-physician relationship
Application to all medical practice
Awareness needed as to what is happening within patient, between patient and physician, between patient and his environment
Transference (acceptance and over-valuation) and counter-transference (indifference and hostility)
Physician's reaction to his patient's problems

2. Technique of the interview
Attitude toward patient
Approach to the patient

3 and 4. History taking
The history as a tool in obtaining an understanding of the patient, his development, his problems, and his present status (healthy or unhealthy)
The history as a longitudinal, dynamic study; not a cross-sectional, static picture
Methods
Content

5, 6 and 7. General principles of psychotherapy: Basic psychotherapeutic and related techniques
Types and levels
(a) Manipulative
Alteration of aspects of the environment
Planned regimen
(b) Educational
Explanation
Advice
(c) Supportive
Reassurance
Suggestion
(d) Release of emotional tension
(e) Catharsis
(f) Interpretation
(g) Uncovering techniques
Use and misuse of these techniques
(a) Indications for the use of each procedure
(b) Contra-indications and hazards regarding each procedure
(c) Dangers of reassurance and suggestion
(d) Interpretation only when quite obvious
(e) Catharsis only when difficulty very close to surface
(f) Uncovering techniques not desirable for general physician
(g) Good judgment based on understanding of situation essential
(h) Importance of knowing why a given psychotherapeutic procedure is undertaken
Scope and use of community resources and auxiliary personnel
(a) Social work
(b) Educational possibilities
(c) Clinical psychology: psychometric and other special tests
(d) Clinical criteria regarding limitation of intelligence

8. Extreme psychopathology and implications for the general physician
Clinical criteria and indications for handling
Possibility of schizophrenic or depressive reactions in neurotic patients
Danger signals

9 and 10. War neuroses: neurotic patterns revealed in acute overwhelming traumatic situations
Etiology and dynamic understanding
The anxious patient
The belligerent patient
The depressed patient
The passive dependent
Paranoid reactions
Hysterical conversion and anxiety states
Problems facing returnees

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Recommended Supplementary Reading

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THE HOMOSEXUAL WOMAN

JANE MacKINNON

Representing as it does an entirely different way of thinking and living, it is odd how easy it is to conceal homosexual tendencies. This holds particularly true where women are concerned because a masculine woman attracts less attention than an effeminate man. In many cases, she is respected and admired for her manly qualities. As a woman who is at the same time a homosexual and a member in good standing in her community and profession, I can vouch for the truth of this.

No doubt one reason for the ease with which we can conceal our attitude is that so few people are at all conscious of our existence. Homosexuality in men has been studied so fully that the general public is more aware of their problem.

To those whose sex life is based on heterosexual relationships, the homosexual is a grotesque, shadowy creature—a person spoken of with scorn, pity or lasciviousness. The person so spoken of is often in the audience. If you are not one of us, it is impossible to realize our feelings when this occurs. It is incredible to us that a well educated girl could make the following remark: "What do they look like? I wonder if I've ever seen one?" It is a perfect example of what the average person thinks, the few times he thinks about homosexuality at all. Fortunately for us, there is no identifying mark. Contrary to what some may think, we have no secret means of recognizing one another. Many women, not homosexual at all, wear suits a lot, cut their hair short and seem, on the whole, very unfeminine. The active homosexual often makes herself look very attractive in order to please the person she is trying to charm. Appearances have much less to do with it than most people assume they do.

What is it like to be this way?

You are always lonely. It makes no difference how many friends you have or how nice they are. Between you and other women friends is a wall which they cannot see, but which is terribly apparent to you. This wall represents the difference in the workings of your minds.

Between you and men friends is another difficult misunderstanding. Very few men desire platonic friendships, the only kind of which you are capable so far as they are concerned. The endless bitter disagreements with them cause many of us to renounce their companionship entirely. Very few men understand the need we have for their friendship and the aversion we feel for sexual love. Unable to find love or its most acceptable substitute friendship, we frequently become psychiatric cases. You cannot keep a healthy state of mind if you are very lonely.

The inability to present an honest face to those you know eventually develops a certain deviousness which is injurious to whatever basic character you may possess. Always pretending to be something you are not, moral laws lose their significance. What *is* right and wrong for you when your every effort is toward establishing a relationship with another which is completely right to you, but appallingly wrong to others?

How do homosexuals feel about one another?

One of the saddest facts in this entire picture is that we seldom like one another. On the surface this appears ridiculous, but there are good reasons for it. In order to make it more clear, let me describe the general categories into which we fall.

There are certain things which are characteristic of each type. However, it is important to remember that merely because a woman may have some of the following characteristics, she is by no means to be considered a homosexual or even one who has such tendencies. This is because the intelligent homosexual always adopts the manners and customs of the group to which she belongs. Physical build plays a large part in determining what type you are.

Type I is a large person, that is, tall although not necessarily heavy. She is successful in the business world. She is intelligent and uses her manly qualities to advance her in her work. Her clothes are good, she frequently wears tailored suits and dresses and does not care for fussy hair styles or frills of any kind. She is not drawn

to another like herself because she is the aggressive sort whose efficiency and capability make her desire a partner who would be emotionally dependent on her. In many cases her behavior with her friend can be likened to that of a mother with a helpless child.

Type II is small, feminine in appearance. She can be just as aggressive as the woman described above and, although the two types do mix, the relationship is not entirely satisfactory to either. This is because both would want to dominate.

Types I and II have certain things in common. They are both completely homosexual in their desires. They are always the active, aggressive partner. They cannot be satisfied unless they dominate, that is, assume the rôle of the man. That they associate at all is usually due to the inability to find another partner.

There is another more delicate factor to be mentioned. What we are considering here is something so intimate that few people have any idea of the contradictory elements present. To a homosexual there is something incongruous, embarrassing, about making love to another like herself. The entire basis of the friendship is the pretense that one of the women is a man. It is uncomfortable to have in the back of your mind the idea that your associate feels just as you do instead of as a woman would. It is so much a business arrangement that it seems rather indecent.

Type III is not a real homosexual, but has strong tendencies that way. This type of girl is a natural object for the attentions of the types described above. No homosexual woman would force her attentions upon another who was completely unwilling.

This third type is almost without exception a weak individual. She may have some strong characteristics but her craving for sexual gratification is so great that she will accept it from the homosexual woman if there is no man to satisfy her.

The fact that many of these women would be heterosexual if we let them alone is no deterrent to us if they appear at all amenable to our suggestions. Education, breeding, all those things do not prevent the homosexual from drawing such a woman into her orbit of dominance if she possibly can. Her need for relief from sexual tension and loneliness is too great. Yet, so weak are most women who yield to an aggressive homosexual, that this situation often becomes a tormenting one for the latter. This is because the weaker individual cannot break off the relationship nor can she reconcile her conscience to it. Unlike the complete invert, she often feels it is wrong but can neither accept it nor end it.

Who is aggressive and who is passive?

The active homosexual always initiates the relationship. Usually the other woman is too shy to do so. However, when the two are finally on terms with one another, the aggressive type does not always take the active part. With another like herself, she would feel she had to dominate. With one whom she had drawn into it, she knows that she has the stronger personality and, therefore, can permit the other to assume the aggressive rôle. Some homosexuals retain just enough femininity to want to surrender themselves to another from time to time.

On the whole, the Type III individual becomes involved without realizing just what her friend wants. Needing the sexual relief, she permits the homosexual to love her. Type III's entire background having produced the feeling that this sort of behavior is wrong, and, lacking the more urgent drive of a completely homosexual development, she seldom wants to take the initiative. The feeling that it may not be so wrong if she doesn't take an active part comforts her and makes her unwilling to assume such a rôle unless she is implored to do so.

Type IV hardly deserves mention. They are those who capitalize on the curiosity of people who are willing to pay to see something disgusting. I refer, of course, to those whose activities in night clubs in the larger cities attract many people looking for a thrill. The entire matter is much too personal to be exploited in such a way. The behavior of commercial inverts does much to color the public's ideas of us.

What happened to me? Why do I have to be this way?

No doubt every homosexual has pondered these questions, searching for an answer that will bring her peace of mind. Realization of the tendency comes slowly. It is not a question of waking up some morning and

thinking: "Why, I'm a homosexual." I was nineteen before I ever heard the word, a sophomore in college at the time. The way in which it was mentioned in a conversation made me wonder if that was what was wrong with me. A quick look at the dictionary told me immediately that not only was I a homosexual, but that I was a most unpleasant individual, a person whom anyone decent would avoid like the plague. The next impressions I received of myself through reading were equally terrifying. I had heard of degenerates, but never realized that many would think me one if they knew a little more about me. Puzzled, bewildered, I could find nowhere a single kind word being said. Most of the writers of the books could not seem to understand that a homosexual is not a *term,* but a *person.* She has feelings just as anyone else. She has an additional burden—the necessity of being quiet about her troubles, the inability to tell her friends anything about herself. What is her position? She must occasionally be present when her friends talk about her and those like her in the most unpleasant terms you can conceive. Yet her friends and her employer, not knowing, like her a lot. If she were to say—and it is often a temptation—"I am a homosexual," the repercussions would be all that anyone could imagine.

I was unhappy in my high school years. I did not know just why at the time, but I was. I never had dates because I did not bother to make myself attractive to boys. I never thought about them at all. If I didn't like them, neither did I really dislike them. They just failed to interest me.

My parents were in their fifties at this time. Instead of wondering why I never complained about not having dates, they were very thankful that I wasn't "boy crazy."

In college I lived in a dormitory for four years. I was content most of the time. I became more reasonable about my appearance and conformed more to current fads. Every year I developed a terrific crush on some new girl, always an older one. My raving about her at home only provoked my mother into saying that she wished I wouldn't idealize my friends so much. She never thought that there might be more than met the eye in my behavior.

Almost without exception, I lost these friends because I did too much for them. I would have waited on them hand and foot if I dared. Before friends, I restrained myself just enough and talked about boys just enough, to keep them from being too suspicious. Had we known more about homosexuality, my friends probably would have recognized my situation. As it was, they never did, any more than my parents did. The girls on whom I had the crushes enjoyed my infantile adoration and, realizing that to say anything would be to draw themselves into it, they made no remarks. When they became tired of it, they dropped me. Some of my blackest hours were those in which I realized that they no longer wanted me around. It was several years, however, before I ceased to rush headlong into such situations.

When I became a senior, I met a boy whom I liked rather well. We went together for three months, the longest I have ever gone "steady" with any man. At the end of that time we were both bored and so broke it off. I felt a definite relief from the strain.

This made me realize something very fundamental. In the back of my mind, I knew I should not feel as I did about other women. However, and this is important, I was convinced that it was only because I had not met the right man. Who is the right man? Knowing now how odd my conception of this man was, I can still reproduce him in all his unreality because the concept has changed very little.

His outward appearance does not matter. The thing I wanted most was friendship; definitely not a sexual relationship. The readers of this article will have no delusions about a homosexual being prudish. The fact of the matter is that a man's attentions bore us to such a point that we cannot even pretend to enjoy them. The necessity of kissing a date several times during the evening becomes a real ordeal.

The search for a perfect man is part of the psychology of homosexuals who marry. The woman who does this brings only misery to herself and her husband. She is invariably a cold wife and frequently her nerves go to pieces under the strain. Probably many who marry never had relations with another woman, and therefore do not realize how strong the homosexual tendency is. There

is one exception to this: the few times that the woman marries a man who is also homosexual. Many men can obtain more satisfaction out of this sort of arrangement than they could from the other type of marriage. This would give both the companionship they crave without the sexual obligations they cannot fulfill.

I kept thinking I had not had enough experience with men, had not really given them a chance. After I left college, however, I became more attractive to them and learned how to handle them better. It just didn't work. I froze up after a while, became bored because none of them offered me friendship —only sexual love. When I had proved to myself that there was nothing in it for me, I decided to have no more dates. I have had very few since then.

How do I fill my life?

I am well-to-do financially and can go places and travel. I take underprivileged children on outings, to circuses, etc. This satisfies my need for someone to be dependent on me. My energies, thus diverted, do not travel always in the same channel: that which develops sexual tension.

Do we feel we have an advantage over the heterosexual person?

From the point of view of leading a full and happy life, we are definitely at a disadvantage. No one is content who is so very lonely. No one is content who has to exercise so much will power to subdue sexual desire.

However, there are advantages. We are frequently able to build successful careers in professions that are concerned with working with people. We are two-sided, often understand others better. Many of us are artistic, can act or write.

The moods of depression to which I am subject may be brought on by seeing someone very attractive who is equally unattainable. Then I feel frustrated and at a disadvantage. On the other hand, when feeling good, I am more than equal to anyone else, not at a disadvantage at all.

One pitfall to be guarded against is alcohol. If you are lonely, depressed, it is very easy to cure the feeling with some drinks. It is easy to feel sorry for yourself, to convince yourself that no one is as unhappy as you. The liquor always puts you on top of the world. This is no problem that can be easily solved. You have moments of introspection in which you see your life dragging out and you worry for fear you will not always be able to control yourself. It scares you to think that your physical requirements might become such that you would do something terrible or degrading in order to satisfy them. If you do not act in some way to help yourself, your mind may not be able to bear the strain and you will wake up some day in a psychiatrist's office. Liquor helps us fight down the urgent needs of our personality. If you can limit yourself in what you drink, it is better to relax this way than try to fight it alone. It is something that must be watched, of course, and I know that not all of us watch it carefully enough.

What can be done to correct our situation?

Hardly anything has appeared in print which would warn parents of such tendencies in their children. Almost without exception, they ignore any warnings which appear in puberty. Instead, like venereal disease and other hush-hush subjects, publications that deal with this problem are often banned. Therefore, many are almost completely unaware of its existence.

The rapidly developing science of psychiatry, by bringing this out into the light, could help us by making available more facts of why we are as we are. Some of us torment ourselves with the idea that we are "evil." We are not degenerates, yet many refer to us in such terms. We are considered a sort of sex criminal. Not only should people realize that there are lots of us, but they should have their attitudes toward us changed. Then the parent, instead of being horrified, will be able to help his child to adjust to a rather hard world.

Self-examination is not enough to resolve the confusion in our minds, a confusion arising from our idea of ourselves *vs.* the idea voiced by the heterosexual person. The best way to keep us from compensating our loneliness and sense of inadequacy at the expense of weaker individuals is to provide us with knowledge about our place in the order of things. There will be fewer homosexual women in mental hospitals and psychiatric offices if we are recognized as human beings instead of as material for a chapter in a book on abnormal psychology.

THE USE OF ELECTRIC SHOCK THERAPY IN PSYCHONEUROSIS [1]

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There has been a threefold increase in the admission rate of patients suffering from psychoneurotic disorders at the New York Hospital-Westchester Division in the past 25 years. In 1945 this group comprised about one-fifth of the total admissions. During more than 20 years of the last quarter century the treatment given these patients has varied little. Treatment was based on dynamic psychobiological principles well known to all psychiatrists and was supplemented by a full program of activities, including physical education, occupational therapy, physio- and hydrotherapy, and socialization. In 1941 and 1942 we made a study of the hospital treatment of patients suffering from psychoneurotic disorders. It was a review of our experiences with 100 men and 100 women psychoneurotic patients admitted consecutively over a 10-year period from 1927 to 1937.

Since 1942 electric shock therapy has been used as an adjunct to the usual therapeutic program in the treatment of certain selected cases of psychoneurosis. In this paper an attempt is made to formulate factors involved in the most efficient use of electric shock therapy in the treatment of psychoneurosis, as well as to compare the results of treatment with this adjunct with the results obtained in the pre-shock era. Such an evaluation cannot be complete. It is limited by the fact that the illness involved is so subjective and individual in its manifestations that it does not lend itself easily to any completely objective methods of delimiting, measuring and comparing.

Patients given electric shock were selected from those who did not show a quick response to the usual régime of treatment. In these patients the neurotic pattern was so deeply impressed, their preoccupation with their symptoms so great that a psychotherapeutic approach was blocked.

The aim of treatment in psychiatry is to improve an individual's efficiency in his adjustment to his environment. Back of neurotic symptoms lie the influence of culture, individual conditioning experiences and physical and temperamental constitutional factors determining a personality's capacity to handle life. Electric shock treatment does not, in the light of our experience, fundamentally affect these factors. It has proved useful, however, in breaking up the pattern of neurotic symptoms. Long standing gastro-intestinal and cardio-vascular complaints which are based on increased visceral tension are generally relieved or disappear completely following electric shock. Anxiety and depression are strikingly alleviated during the course of shock therapy. Thus such symptoms as insomnia, suicide preoccupation, and obsessive compulsive phenomena are reduced. The patient tends to develop greater confidence in the physician with the relief of his symptoms and becomes more amenable to suggestion. Energy is freed for handling the external environment and can be more efficiently directed into channels conducive to mental health. The patient is better prepared to come to grips with his psychological problems on which his symptoms were based.

When compared with our standards for healthy living, a mental disorder is a poor and inefficient adjustment to life but it is a kind of adjustment to life. Symptoms in a psychiatric disorder may, and frequently do, play two rôles. They prove unconsciously and often consciously to be a more immediately satisfying mode of life. They also, and this is often overlooked, may be part of the personality's attempt at protection and healing. A parallel situation is seen in physical illness where symptoms such as fever and pain may be the result of defensive reactions of the body. These abnormal body states defend the individual from the cause of the disorder at the same time that they attack it.

The rôle of the timing of shock treatment during the course of psychoneurosis is important. In illnesses where modifiable situ-

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ational stresses have been prominent in the etiology it may be better to postpone treatment until readjustments have been made in the environment. Often such manipulation in itself results in relief of symptoms so that shock treatment is unnecessary.

Before admission to the hospital many neurotics have been subjected to well-intentioned but poorly directed attempts at treatment including major and minor operations, heavy sedation and dieting. These may have further reduced both physically and psychologically their capacity for adjustment. These patients are often suspicious of and resentful toward any physical methods in treatment. It may have become a matter of almost conscious pride in the patient to prove the doctor's efforts ineffectual. Electric shock is usually contraindicated in such individuals or at best should wait until the patient is better prepared psychologically and physically for it. Electric shock adds a further burden to an individual who is physically reduced and can precipitate a complicating organic delirious state.

We have found that electric shock treatment was indicated in only about one-third of patients suffering from psychoneurosis who were admitted to the hospital.

It is well known that it is unwise to face a patient too precipitately with the basis of his neurotic symptoms, particularly when hostilities toward loved ones or sexual conflicts are involved. For best results such discussions should be postponed until a positive relationship has been built up between the patient and the physician, and until it is felt that the patient has developed a sense of security which will help him withstand the lowering of his self-esteem that first attends the development of insight.

In electric shock therapy the psychological defenses protecting the individual from facing his deep psychological conflicts are weakened. It is not unusual during the course of treatment to find the patient's mind being flooded with memories that may reach back into infancy. For example, a young woman artist became hypochondriacal and anxious following a stormy and traumatic child birth. During shock treatment she recalled with great distress her jealousy of males when she was three and her desire to castrate her deeply loved father after seeing farmhands castrate pigs. The patient can be made ready for such experiences and the psychiatrist should be prepared to manage the impact of such memories on the patient.

The physical nature of this treatment and the frequently dramatic results can easily influence us to forget our rôle as psychiatrist and physician. Shock therapy brings with it somatic symptoms based on altered physiology. We are all familiar with these—memory impairment, aches and pains due to muscle and tendon strain, headache and nausea. Such symptoms are useful to the psychological needs of most neurotic patients. They can be elaborated and incorporated into the defenses of the neurotic who generally displays an increased body consciousness. These symptoms developing in psychoneurotics during shock therapy are a direct challenge to the therapeutic ingenuity of the psychiatrist.

The fact that the treatment is dramatic and something which comes from without appeals to deep neurotic passive needs. The psychiatrist should be prepared to handle the devious use that patients can make of such dramatic episodes in their life.

It is important to evaluate what electric shock treatment may mean to a patient. To women it often symbolizes a sexual experience related apparently to the supine and passive position in which she lies when treatment is given. This can be either an unpleasant or a pleasant experience. Women with strong aggressive drives may resent their passive rôle in treatment as well as the fact it is given by a male. One patient whose life history demonstrated the presence of much masculine protest expressed herself as follows: "Why are the effects of treatment different in me? Others tell me they feel so good after them. You must give me stronger treatments." She had better results from treatments given by a woman physician.

Another woman patient gave the following interpretation of what electric shock treatment symbolized to her. "The treatment was simply a complete orgasm—not self-evoked like masturbation but shared as it should be with a man. The rubbing of the jelly on the temples was the fore-play and

the insertion of the mouth gag was the oral counterpart of the insertion of the penis in the vagina. The nurses and attendants were metamorphosed into members of my family who condoned and approved and helped remove some of the sense of guilt and terror where intercourse was concerned."

Men following treatment are frequently noted to feel for their genitals to reassure themselves. Such castration fears are not uncommon in women also.

For best results we believe it is necessary to give the patient ample opportunity to ventilate his fears about the treatment. Any questions he asks should be answered fully and truthfully; each step of the procedure should be explained in detail. Most intelligent patients have learned that electric shock treatment causes a convulsion and they need reassurance about this.

It is a policy in the New York Hospital-Westchester Division to attempt to give the patient, before shock treatment, at least superficial insight into the use he makes of neurotic symptoms to protect him from facing unpleasant situations or attracting to himself the attention of others. A psychiatrist armed with the facts of a carefully and systematically taken history is aware of the preferred reaction patterns of the patient. Under the carefully supervised life of a modern mental hospital the first few weeks of hospitalization present many gross examples of these neurotic reactions and these can be immediately discussed with the patient.

With the background of knowledge as indicated above the psychiatrist can be prepared to determine when electric shock is indicated, if at all, in the course of the illness and to manage the patient's own reaction to treatment. We do not start shock therapy until many weeks after the patient's admission to the hospital. The average length of hospitalization of patients concerned in this study before shock treatment was instituted here was 2 months, with extremes of 1 month and 14 months.

In our experience electric shock treatment does expedite psychotherapy in those patients who seem rutted in their illness. The dynamic psychotherapeutic work remains to be completed after shock therapy if substantial benefit is to be obtained. The improvement immediately following electric shock among psychoneurotics has not been as dramatic as in many psychotics with the exception of certain cases of reactive depression. Substantial improvement in general has been associated with the gradual development of insight by psychotherapy. This dramatic improvement may not be displayed for some weeks after the completion of shock treatments.

The average period of hospitalization following shock treatment was 4 months. This period includes among those patients who recover, many weeks of psychotherapy following the loss of all symptoms. The patient may not only be as well as he was before his illness but actually he may be adjusting on a better level than ever before in his life. We believe that the carefully controlled environment and the broad supervised program of activities create a cultural milieu which in itself is of great significance in the development of healthy patterns of living. The passage of time in this environment is necessary for the firm establishment of these healthy habit patterns. The hospital experience often represents the first opportunity the patient has had in his life to have close contact with psychologically mature adults. The opportunity for identification with these models is of striking therapeutic significance. The stage in the illness when this can be of greatest use is in the convalescence and the weeks and months spent in the hospital after the subsidence of symptoms is a good investment paying dividends in future mental health.

RESULTS

Fifty patients suffering from psychoneurosis had treatment supplemented by electric shock in the 3-year period between 1942 and 1944. Those patients whose symptoms were largely anxiety, tension and depression were most benefited. Thus among those with reactive depressions 9 of 11 recovered. Of those with anxiety conditions 10 of 12 were recovered or much improved. Seventeen of 18 suffering from a mixed psychoneurosis were similarly benefited. Of the compulsive obsessive group, 4 were markedly benefited while 4 were improved and 1 unimproved.

These results have been compared with those obtained in the earlier mentioned group of 200 psychoneurotic patients whose treatment was not supplemented by electric shock. There was a distinct difference between the two groups in the average length of hospitalization. In the shock treated group it was 5½ months while in the non-shock treated group it was 8¾ months. Thus the period of hospitalization of those who received electric shock was less than two-thirds that of the group treated in the pre-shock era.

Thirty-nine percent of the 200 non-shock treated patients and 46% of the 50 shock treated patients recovered. This is not an impressive difference considering the discrepancy in the numbers involved. However, 80% of the shock treated group were home recovered or much improved, that is distinctly benefited, while but 59% of the non-shock treated group were so benefited. Of the 200 patients, 151 received some benefit from treatment while 48 of the 50 shock treated patients were so considered.

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AN EVALUATION OF SHOCK THERAPY[1]

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Since the introduction of convulsive shock therapy by Sakel in 1937 for the treatment of schizophrenia there has been much discussion as to its efficacy. The literature has been very intensive and increases yearly. There has developed much tension between the "shock" and "non-shock" psychiatrist, voluble in both acclaiming and denouncing it. The differences in opinion are due largely to the inadequacy of these shock studies. The studies of shock therapy have been markedly variable—from unbounded enthusiasm(80) to a skeptical and critical condemnation. The results of these studies have been dependent not only on the prejudice of the observer, but on the diagnostic criteria used; the time interval following shock used as the basis of determining whether the shock was the therapeutic instrument producing the change in the patient; and also on the type of study made. Practically all the studies are inadequate because there has been too little stress laid on the investigation of the possible deteriorating effects of the shock on the personality of the individual. Until such studies become more numerous the purely statistical studies which enumerate the percentage of remission and much improved will never settle this question.

ANALYSIS OF THE LITERATURE

The papers on shock therapy can be divided roughly into three groups. Firstly; the type of study which accurately records the remission rate following shock with no consideration of the time element or the frequency relapse. This is on the whole, the largest group. Papers of the second group have a follow-up study which is generally too short to allow proper evaluation of relapses and makes no attempt at studying the possible detrimental effects. The third group, by far the smallest, attempts to make adequate follow-up studies and personality studies following shock therapy. Readmission studies on patients who have received shock on their previous admission are sadly lacking.

Many investigators have criticized the quality and type of studies made(22, 24, 35, 39, 48). The difficulties in comparing studies have been repeatedly stressed by writers like Nolan D. C. Lewis, who pointedly called for more adequate criteria for diagnosis and cure. The classifications of "greatly improved" and "much improved" are so broad as to give only a vague idea of their limits.

There is a great need to set a time limit in deciding whether the patient has benefited from the shock directly or from other therapeutic measures. George Alexander advised the setting of a 30 day limit following shock and feels that this will greatly alter the remission rate(23). A recent study by Alexander bears this out very well when he compares the therapeutic results without a time limit and with a time limit. Without studying the time factor 84% of the involutional cases; 83% of the schizophrenias; 93% of manic-depressive psychosis showed successful results. However, when the time factor was set, the successful results in the involutional cases amounted to 41%, schizophrenia 56%, and manic-depressive psychosis 67%. The overall effectiveness was reduced from 87% to 51% when the time limit was set(66). This striking variance in the remission rate gives us a small indication of the differences in shock studies when the criteria are not adequately set down and standardized. Follow-up studies have been wholly inadequate except for the few excellent studies like that of the New York State Commission on state hospital problems(50).

Other studies have given very misleading figures as to the value of shock by considering the immediate remission rate as indicative of the efficacy of the shock. It has been clearly pointed out in many studies that there is a wide discrepancy between the immediate effect and the long term results. Rennie shows that the rate of remission falls from

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From St. Elizabeths Hospital, Washington, D. C.

55% to 32.8% in dementia præcox in 3½ years, and from 75.5% to 55.8% in manic-depressive in 3½ years(1). Ebaugh shows that the remission rate falls from 63.5% to 48.2% in 1 year with insulin(4). Polatin shows that 33% of patients who manifested improvement relapsed within 2 years. There is a wide range as to results extending from 70% by Sakel, which was never confirmed, to no remissions by Longfeldt. The favorable reports are extensive and have appeared in a large variety of journals(8, 9, 16, 19, 28, 29, 30, 51, 52, 58). On the other hand there are many papers indicating unfavorable results. Pacella and Epstein refer to schizophrenia as being refractory to electro-shock and metrazol. Rymer and Ebaugh in a follow-up study of 400 cases drew no conclusions of the efficacy of shock over non-shock. Neilsen, Geshell and Coen in a study of 316 patients over 3 years show no value of shock therapy in schizophrenia (41). Other workers have shown poor results—such as Smith, Hughes, Hastings and Alpers, Bennett, Lehoczky, Eszeny, Horangi Hechst and Bak.

A large number of studies indicate that the remission rates in treated and untreated cases of schizophrenia are the same. Rennie in a study of 121 patients following them one to three years, reports that 32% of the patients treated with shock are recovered or improved after 3 years, and 35% of non-shock patients after a 9 year period. Brooklyn State Hospital reports in 1941 showed 43.1% improved and released from the hospital, while the studies from Phipps Clinic show 42.7% discharged or improved without shock. Reznikoff in 1943 treated 100 cases of dementia præcox with metrazol at 32% improvement and concluded "essential schizophrenia pattern remains unchanged and only some symptoms are ameliorated."

The studies with metrazol, insulin and electro-shock produce approximately the same results and this is significant since it has been considered that insulin is more valuable in schizophrenia. Smith, Hastings, Hughes and Gotten, Gottlieb and Hutson, and Reznikoff show the same remission rates in treated and untreated patients with insulin and metrazol(14, 15, 18, 26). Roberts in matching 74 treated with 74 controlled, concludes the high remission rates reported by many workers are not confirmed. He agrees with Cheney and Drewry, Hamargren and Stenberg, and Kawalwasser and Clow, that insulin facilitates improvement only of a temporary nature(34).

Many workers have noticed the very high readmission rates in patients who have been shocked. This is of great significance as I will show in a study made at Saint Elizabeths Hospital. Not only is there an early recurrence, with the original remission rate falling very sharply as shown by Rennie from 55% to 32.8% or by Ebaugh from 63.5% to 48.2% or by Polatin who shows that 33% of the patients who manifested improvement relapsed within 2 years; but the recurrence tends to nullify the conclusion concerning the economy of such treatment (1, 4, 6, 15, 36). This factor is stressed by the Insulin Shock Therapy Commission in the state hospitals in New York which noted the very high readmissions and indicated that in the first year, 56.7% of the insulin treated patients returned while only 43.8% of the non-treated patients returned. It is also very interesting to note in their studies that the highest percentage of treated returns in comparison with the non-treated occurred in the third year following therapy; a difference of 24.8%. They noted this high readmission rate but could not adequately account for it. They noted too that in the treated groups those staying at home decreased from 83.3% to 39.2%, a drop of 44%, while those in the untreated group fell from 59.2% to 51.7%, only a 7% drop, indicating that those in the treated group returned to the hospital far more often than the untreated group.

Readmission Study at St. Elizabeths Hospital

In a study of 152 readmitted patients at Saint Elizabeths Hospital an attempt was made to evaluate the effects of shock therapy in the frequency and interval of readmission. The patients were selected according to the diagnostic category of dementia præcox or manic-depressive psychosis. No attempt was made to distinguish the sub-groups in dementia præcox. The writer was in agreement with Kalinowski who found it was impossible to formulate any rigidity in classification since symptoms changed so fre-

quently during therapy(61). One group consisted of patients who had one or more previous admissions and who had received shock therapy either at Saint Elizabeths Hospital or elsewhere. The other group had one or more previous admissions but had not received shock therapy. The patients were matched as far as possible as to age and duration of illness and number of readmissions to make the groups comparable. Abstracts and summaries of treatments were obtained from the previous hospitals on all the readmitted patients so that an accurate investigation of their previous admissions could be made. Many of the cases which ordinarily would be suitable for such a study had to be rejected because of inadequate information. The cases were not selected; all cases that satisfied the necessary criteria were used for the basis of this study.

There were 44 patients suffering from dementia præcox who received shock, and 45 who did not. It was noted that the average readmission interval following shock therapy was 1.6 years, while in the non-shock group it was 4.8 years. The interval between the second and third admission was 1.57 years for the shock group and 4.86 years for the non-shock group. In the shock group the readmission interval ranged from 1 month to 8 years while in the non-shock from 1 month to 20 years. This seemed to indicate that patients who received shock are readmitted on the average of 3.2 years sooner than those who do not receive shock. This agreement with the study made at the New York state hospitals which indicate a higher readmission rate on shock patients(50). Seventeen of the shock group and only 6 of the non-shock group were readmitted under 1 year. In the manic-depressive group 30 shock cases were compared with 33 non-shock cases. The average readmission following shock was 1.4 years while in the non-shock cases it was 4.36 years. The interval between second and third readmission in the shock cases was 1.1 years while in the non-shock it was 3.17 years. In the shock group the readmission interval ranged from 1 month to 5 years, in non-shock 6 months to 14 years. This seems to indicate that the shocked patients are admitted on the average of 2.96 years sooner than the non-shocked patients. Ten of the shock patients were readmitted under 1 years while 3 of the non-shocked patients were admitted under 1 year. (See Table I)

There was no relationship between the type of shock and the frequency of readmission. On the whole the larger the number of shocks the earlier the readmission. In many cases it was noted that where there were frequent readmissions following the shock, the interval between the readmissions dropped sharply after shock therapy was given. It was felt that such a study would be more valid if larger numbers of cases could be obtained, although this was difficult since shock therapy has not been used long enough to accumulate a large number of cases.

TABLE 1

	Schizophrenia		Manic-depressive	
	Shock(44)	Non-shock(45)	Shock(30)	Non-shock(33)
1st readmission interval.....	1.6 yrs.	4.8 yrs.	1.4 yrs.	4.36 yrs.
2nd readmission interval.....	1.57 yrs.	4.86 yrs.	1.1 yrs.	3.17 yrs.
Readmitted under 1 yr.....	17	6	10	3

Duration of Illness

In the involutional psychosis and manic-depressive psychosis the reports are on the whole enthusiastic in favor of shock therapy. Most writers indicate that it at least shortens the illness, although there is no evidence to show that it prevents recurrences or that it interrupts the psychic pattern in the manic-depressive psychosis(26). Some writers, on the other hand, indicate that long range studies show that recoveries in treated and untreated cases are almost equal. Rennie showed that 75% showed favorable response with shock therapy while 70.7% showed favorable response without it(1). This was in addition to the fact that recovery rate following shock after 3½ years fell from 75.5% to 55.8%. Ziskind *et al.* showed that the remission rate is the same for treated and untreated in the affective psychosis, 88%

to 86% after 3 years. He showed that recurrences occurred with equal frequency in both groups.(18). Most authors conclude that it is of value in the manic-depressive psychosis because it shortens the illness and lengthens the stay out of hospitals. This is doubted by the author because of the increased readmission rate following the shock therapy.

It is striking that almost all authors agree that shock therapy is efficacious in those cases where the prognosis is ordinarily considered to be very good. This is true with schizophrenia as well as in the manic-depressive and involutional psychoses. Chase and Silverman show that shock therapy is valuable in cases where the prognosis is good and unfavorable where prognosis is poor (13). In cases where the spontaneous remission is high, shock therapy shortens the illness. Nolan D. C. Lewis states that the patients benefiting from insulin have the same characteristics as those formerly improved by other types of treatment. Ebaugh states that patients benefiting from shock are the same as those that benefited without it(4). Elizabeth Dodds in a short study made in a hospital in Britain(5), states :

> Results from schizophrenia are poor. The 31.5% discharge rate noted occurred in cases of very recent onset and their clinical history suggested the likelihood of remission with or without special treatment. As with other workers our experience suggests that the best results can be obtained from melancholia, especially the involutional type. The involutional depressives have the most favorable prognosis without therapy. The length of stay in the hospital before treatment was 6 months; when treated it is 4 months. This indicates a reduction in time and makes a strong case for the value of treatment; however, the degree of permanence has not yet been established.

An overall picture, therefore, of the efficacy of the various types of shock therapy seems to indicate that its value is of great doubt in schizophrenia, while in the manic-depressive psychosis and the involutional psychosis there still appears to be much enthusiasm in terms of shortening the illness, reducing hospital stay, and increasing the time at home. The New York State Hospital Commission recently has recommended that insulin therapy be given to all schizophrenics in New York because it decreases hospital stay and saves the state money. This reasoning would be valid if we had a sufficient number of significant studies to indicate that this is actually the case. This study of readmissions from Saint Elizabeths Hospital on the other hand seems to indicate that the readmission rate is increased to the extent that although the hospital stay is shortened in the first admission, there are more subsequent admissions.

Malignant Aspects

Another factor that bears investigation is the amount of damage done to the patient, so that its long range value can be interpreted adequately. In the absence of definite studies it seems premature to make such sweeping recommendations as in the New York State study and to continue to advise unqualifiedly the use of shock therapy.

The one problem which at the present time requires extensive exploration is that of the malignant effects of shock therapy on the personality of the individual. Aside from the fractures and dislocations implicit in the convulsions, there are other more subtle complications. Nolan D. C. Lewis indicates some complications of the convulsions such as the fractures, dislocations, cardiac complications, sensory disturbances, cerebral-vascular accidents, pnuemonia, complications of tuberculosis and lung abscesses, sore back and prolonged memory defects. These occur in so small a number of cases as not to be of crucial importance in the use of this therapy. However, few studies have investigated the physiological, clinical and psychological damage done. The few studies on animals and the few on human subjects revealed considerable brain damage. Alpers and Hughes showed fresh hemorrhages of the cerebral cortex. In cats they found subarachnoid and punctate hemorrhages(35). Epstein states that electro-shock produces cerebral damage, in contrast to Ziskind *et al.*, who note no cerebral damage as apparent from the patient's working ability(1, 18). Some workers note brain damage approximating changes produced by lobotomy(20). This was the experience of the author. Changes resembling frontal lobe damage were also noted by A. E. Bennett who stated that up to 50 shocks produced organic, sensorium defects equivalent to am-

nesia greater than in lobotomized patients(22, 42). Most workers agree that the larger the number of shocks the greater damage produced. Smith, Hastings and Hughes state that memory defects increase with increased number of treatments(26). This is very significant in view of the fact that Kalinowsky and Foster Kennedy advise a large number of shocks, sometimes as high as 40(80).

Solomon notes the potential dangers of insulin, and occasional permanent brain damage(19). Stearn, Dancy and McNaughton note that 10% of cases with insulin show disturbances of cutaneous sensation and the sensation of taste and smell(31). The few post-mortems done indicate significant damage. Ferraro describes focal, patchy abscesses and areas of cortical devastation with acute toxic reaction and fatty degeneration of the neurones after insulin death(35). Weil and Leibert in studying a brain 2 to 10 months after metrazol noted hypertrophy of astrocytes and microglia and state that amnesia following shock may be on an organic basis(35). Tennent also warns of the risk of persistent brain damage in insulin shock. This occurred in a patient at Saint Elizabeths Hospital who was treated with insulin because of her persistent self-destructive impulses. After recovering from a coma lasting 36 hours she had lost her self-destructiveness, became quiet and self-contained but had marked positive left neurological findings and a mental age of 6, as determined by the Bellevue-Wechsler test. The picture was markedly similar to the post-lobotomy state with complete indifference, unconcern with herself and her future. Liberson showed that patients having had shock show the greatest impairment of word association processes(2).

The EEG studies by Finley and Lesko(56) indicate that temporary changes may occur in cases receiving in the neighborhood of 10 metrazol injections, but those receiving 20 or more show permanent brain damage. Pacella, Barreria and Kalinowsky note that because EEG changes are reversible, it cannot be assumed that the changes of the nerve cells are reversible. They state that the best index of the therapeutic procedure is the clinical state of the patient. After 6 months with a large number of convulsions they find evidence of abnormally slow potentials in the patient(56, 57). Levy, Serota and Grinker in 1942 indicated that the degree of cerebral dysfunction varies with increasing number of shocks. They found that 50% of the patients treated with electro-shock show disturbances in the EEG and that 45% show disturbances as determined by intellectual function, but they felt that this figure would be higher if more accurate psychological methods of estimation could be found(15, 17).

Problem of Deterioration

An attempt to evaluate the effects of shock therapy on the personality of the shocked patients was made at Saint Elizabeths Hospital. The psychological tests in current use are not sufficient to indicate the subtle personality changes which can be noted following shock therapy. Very often while the psychometric shows no intellectual impairment, the Rorschach and mosaic tests show a marked emotional flattening with stereotypy and poor form response. Clinical evaluation with particular reference to the patient's higher integrative functions such as a spontaneity, sense of humor, originality of thinking and adherence to generally accepted standards of dress and behavior; and the ability to operate on a level consistent with their intelligence, is helpful in giving one a clear understanding of the deteriorating aspects of shock therapy. Other standards, such as consistent lack of attention to personal habits, bizarre behavior, and apathy unrelated to the schizophrenic pattern must also be noted. Clinical observation, repeated interviews, personality evaluations by repeated contact with the patient are very valuable. After all, our best estimate of the individual is through personal interviews, in spite of the fact that this is dependent upon the investigator himself. Certainly some standardization is necessary, but we can rely on the clinical judgment of the psychiatrist. The memory defects, confusion and dullness, all indicate some intracerebral disturbances, but many workers believe that this damage is transitory and reversible. Although the memory defects do disappear in a comparatively short time and often this is the basis on which one decides whether the damage is persistent; what are the effects on a higher inte-

grative function; the personality of the individual that characterize him as "himself"? What does it do to the individual in terms of a more pronounced regressive tendency? What has it done to the sense of humor; his social finesse; his capacity towards inventiveness and ingenuity? We recognize in those patients who recover without shock therapy some difficulty in adjustment and behavior, and in their emotional life. Does shock therapy aggravate this difficulty? Does it intensify such changes? What specific personality and behavior difficulties are attributed to the shock therapy itself? These questions must be answered before shock therapy can be considered completely acceptable. The Commission on Insulin Shock Therapy for New York State attempted to do this by studying "the level of usefulness" of patients following release from the hospital, according to the "ability to do useful work or to care for himself." This is only part of the answer.

The first problem is to define deterioration. This term is so vague and so broadly used, that often it is difficult to decide that what one calls deterioration is not really a symptom of the disease process itself. Some investigators refer to the fact that deterioration follows schizophrenia. This is an old idea but it has been refuted. Kendig and Richmond(61, 63) have shown that there is no progressive deterioration in the intellectual function during hospitalization but rather a progressive improvement as the clinical status of the patient improves. The Dorland Medical Dictionary defines deterioration "from an emotional and ideational point of view and also from an intellectual point of view." It states:

> that emotional and ideational disintegration causes the patient to lose interest in his workaday life and his social and recreational activities. "Deterioration" is employed to indicate a gradual relinquishment of emotions from the environment and the introversion of the emotions upon a psychiatric syndrome. This applies to a chronic progressive process from which recovery does not take place. However, the degree of deterioration forms the better prognostic guide. Intellectual deterioration causes diminution or impairment of the ability to remember, together with the disorders attendant upon memory losses. Intellectual deterioration is usually observed in patients with destructive processes in the cerebral cortex. Intellectual deterioration perhaps is of secondary interest and may be the consequence of disuse of intellectual faculties such as are observed in patients with a schizophrenic syndrome of long standing.

Others define it as "consistent lack of attention to personal habits, bizarre behavior, disconnected thinking and apathy." Tests are needed badly to study the problem of emotional deterioration. Kalinowsky makes this point in one of his papers(58). Levy, Schroeder and Grinker(57) indicate that more adequate psychological tests would reveal more damage due to electric shock than can be estimated at present.

Deterioration Study

For the purpose of our study, patients who have received shock at other hospitals or at this hospital and readmitted to Saint Elizabeths Hospital, were studied by means of the psychometric and Rorschach tests and the EEG. The shock was received from 6 months to 3 years prior to their admission. An estimate of their post-shock adjustment was made by interviews with the patient and the relatives by the psychiatrist, the social service agency and the Red Cross social service. Extensive interviews were held with the patients in the hospital to determine their mental status, and they were followed as far as possible after leaving the hospital. Members of the group studied were practically all between the ages of 20 to 30, having had only one previous episode at which time they received some form of shock therapy, either insulin, metrazol or electro-shock. Many of these patients were Waves prior to their readmission to Saint Elizabeths Hospital. In none was the duration of illness over 5 years. Some were admitted only 6 months after receiving shock therapy. This group was compared with the group that did not receive shock treatment. They were all examined following recovery from their second psychotic episode. Often the estimate of deterioration was not made by the author but by other members of the staff and at staff conferences.

The results do not lend themselves to statistical evaluation. It was noticed frequently in the shock patients that while the psychometric showed no intellectual impairment, the Rorschach frequently revealed emotional restriction and the characteristics of organic

brain pathology. The dullness which is characteristic, immediately following shock therapy, often persisted for a long time, in some cases for years after shock.

1. A 28-year-old woman was readmitted to this hospital 2½ years after receiving electric shock and an unknown number of metrazol injections. On her first admission she was in the manic phase of a manic-depressive psychosis and was readmitted to this hospital with a diagnosis of dementia præcox, catatonic type. She showed no depression but a blank countenance with complete indifference and unconcern following her recovery. She sat around the ward participating in none of the activities, patiently waiting for her discharge. She expressed no enthusiasm about herself or her future, was humorless, colorless and blunted. Her psychometric showed no impairment while the Rorschach showed definite emotional restriction. She planned to go back to office work and no doubt would be employed at the "same level of usefulness" as prior to her illness but with none of her charm which was in evidence before her psychosis and shock treatment.

2. A 23-year-old female was first admitted in 1943 with symptoms suggesting a depression and received 20 insulin and 14 electro-shocks simultaneously and was discharged shortly thereafter as improved. In the interval before her second admission she was dull, very apathetic and silly and giggled at times. On her readmission 6 months later she showed marked interference with her thinking, with a complete lack of concern over her illness and previous shock therapy. The Rorschach showed a "very simple personality," and the EEG showed abnormal and irregular alpha activity with synchronous outbursts. Another 22-year-old who was sick for 6 months prior to her first admission received a course of insulin shock with 49 convulsions. She improved and was discharged and stayed out of the hospital for 6 months. Finally, when readmitted, she was markedly blocked and dull, disinterested in spite of the fact that her prepsychotic behavior indicated an active interest in her affairs.

It was noticed frequently that in addition to the bizarreness of behavior and a significant lack of attention to their personal needs, there was a loss of the "social senses" described by Bianchi.

3. One of these patients was a 20-year-old female who received insulin therapy in 1938 with 48 comas and 4 convulsions following a period of restless and disturbed behavior, with apathy, hallucinations and delusions. She was discharged in 1940 and readmitted in 1944 to this hospital, having made no adjustment in spite of the fact that she was considered to have improved remarkably from her previous psychosis. While out of the hospital she ran up numerous bills, and bought an extensive wardrobe although she had no interest in her appearance. She was asocial, had no concern for others, and would allow herself to be picked up by any man who would accost her. This was in marked contrast to her prepsychotic and psychotic behavior. She finally became impulsive and had to be readmitted.

4. Another case was of a 31-year-old female who was ill for 3 years and received insulin for 7 weeks, together with 21 electro-shocks and was discharged as improved one year after entering the hospital. She was readmitted one month following her discharge, having come to Washington to see the President about a law suit. She was disheveled and dressed in a bizarre costume, made insulting and belligerent remarks to the White House guard. She was silly, unable to understand why she could not see the President dressed as she was and without an appointment. She was overactive, difficult to handle, and on her readmission she was depressed, apathetic, with many self-recriminatory ideas.

In many of the patients there is a sterility in ideation and rigidity in the use of their mental resources. There is a childishness in their actions and freedom of expression.

5. A 21-year-old female discharged as improved following one year hospitalization and having been diagnosed as dementia præcox, simple type, was readmitted to Saint Elizabeths Hospital. On her first admission she received insulin therapy. She joined the Navy in the year interval before her readmission and there was described as having no "pep," took no interest in her work, talked constantly to everyone about a proposed marriage to some ensign which existed only in her anxiety to see it accomplished. There were no delusions or hallucinations noted, but she spoke openly of her sexual needs and how she would like to satisfy them. She recovered at Saint Elizabeths Hospital after 2 months without shock therapy.

6. A 26-year-old girl who received 30 insulin and 45 metrazol injections on her first admission in 1940 was discharged as a social recovery. She was diagnosed as dementia præcox, paranoid type, and at that time was evasive, blocked and apathetic. She was a college graduate who planned to teach, but following her psychotic episode and after shock therapy, worked as a stenographer and sales clerk. She ran into numerous difficulties, stole from the department store where she worked, became involved in endless love affairs, and finally joined the Navy. She was admitted to Saint Elizabeths Hospital having become overactive and silly. In the Navy she was AWOL frequently, would argue freely with her superiors, and disregarded Navy routine. At the hospital she was facetious, petulant and arbitrary. She wore other patients' clothing and her room was full of the possessions of other patients in the hospital. This behavior was repeated frequently in spite of the many discussions and warnings. She was careless in dress, euphoric, and dealt with her illness in a light, flippant fashion. After discharge she secured a

job as a sales clerk, continuing her anti-social activities. She could not anticipate or foresee the consequences of her behavior and was unconcerned about the future. The Rorschach indicated profound immaturity and childishness, although the psychometric indicated superior intelligence.

The most persistent impression obtained, is that the shock patients show a picture resembling the post-lobotomy syndrome(64). They show lack of appreciation of the gravity of their illness, and lack of concern for the future. There is a considerable loss of self-consciousness. This was quite evident in a 27-year-old college graduate who constantly and with no feeling of self-consciousness talked about herself as being a schizophrenic and requested various forms of therapy such as hypnosis, shock therapy, penicillin, malaria or whatever she happened to be reading about at the time. She had received metrazol on her first admission 4 years prior to her readmission. The post-shock patient often expresses no concern for the needs and demands of others. On parole they frequently engage in censurable activity. They get involved with patients of the opposite sex in obvious places, and no amount of discussion impresses them with the poor judgment expressed in their actions.

In addition to their inattention and inability to concentrate there was some difficulty in carrying out tasks that they were well trained to do before their illness. One 55-year-old male who worked at the switch control power in a railroad intersection found himself completely unable to handle the tasks he had previously done for 20 years. Even 6 months following shock therapy he found himself unable to return to his former employment. There is an inability to estimate the effects or to see the consequences of their behavior. There is a definite restriction in their intuition and imagination and inventiveness. This is a post-lobotomy picture but in a less severe and dramatic form.

Another situation noticed, but about which one can only speculate, was the frequency in the change of diagnosis in the readmitted patient following shock therapy. Out of 45 shock patients, 14 had their diagnosis changed from schizophrenia to manic-depressive psychosis and 5 from manic-depressive psychosis to schizophrenia. If we accept the accuracy of the diagnosis in all these cases then we must consider the possibility that shock has changed the behavior pattern to the extent that subsequent admissions do not resemble the first admission. In many patients where the picture shows the classical symptoms of schizophrenia, on readmissions they exhibited silliness, facetiousness, and would be diagnosed as manic. Even where the same diagnosis was retained in the schizophrenic patient, manic features were dominant. This question needs further consideration.

It was felt in all the cases described here and in many that were not described that the changes were not consistent with the duration of the illness but were specific changes most probably due to the shock therapy. This could not be proven but it was the impression obtained not only by the author but by the various members of the staff.

Summary

In view of these findings, it becomes imperative that shock studies concentrate on investigating the readmission and deteriorating aspects of shock therapy. The findings tend to indicate that shock therapy increases the frequency of readmission and thus raises the question of whether the time saved in the hospital at the first admission is not lost by the early readmission following shock treatment. This is particularly significant since it seems likely that shock therapy does produce deterioration and personality changes which may explain this increased readmission frequency. It is hoped that this paper may stimulate some research in this direction and that more extensive studies will be made.

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EFFECTS OF ELECTRICALLY INDUCED CONVULSIONS UPON RESPIRATION IN MAN[1]

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The occurrence of respiratory changes, including apnea, during induced convulsions is well known, but knowledge regarding them and their relation to the local cerebral physiological changes is incomplete. The present report describes the effects of electrically induced convulsions upon respiration.

Twenty-one measurements of respiratory dynamics were made in 6 cases by means of a closed circuit spirometer system using a face mask; the system was filled with oxygen initially and as necessary during the experiments. The initial respiratory rates were between 14 and 22 per minute, the tidal volumes were between 325 and 1355 cc. and the minute volumes were between 8.0 and 20.3 liters. The averages were respectively 17 respirations per minute, 718 cc. tidal volume and 12.2 liters minute volume (Table 1). Hyperventilation was common during the control period, presumably as a consequence of emotional factors. Apnea commenced immediately on application of the electric shock and preceded the onset of the seizure; it persisted for a variable period after the convulsion (Fig. 1). The duration of apnea was between 47 and 86 seconds with an average of 66 seconds. The form of the respiratory curve showed that the patients performed maximal forced expiration (the Valsalva maneuver) at this time. A period of inefficient or gasping respiration followed after relaxation and lasted for 1 to 22 seconds, averaging 9 seconds; then hyperpnea began (Fig. 1). During the first minute of hyperpnea, the respiratory rate was between 17 and 30; the tidal volume was between 100 and 2040 cc, and the minute volume was between 14.2 and 34.7 liters. The averages for the first minute of hyperventilation were 23 respirations per minute, 907 cc. tidal and 20.9 liters minute volume (Table 1). In the second minute of hyperpnea the respiratory rate was between 16 and 31; the tidal volume was between 100 and 2000 cc and the minute volume was between 14.8 and 38.1 liters. The averages were 24 respirations per minute, 980 cc. tidal and 23.5 liters minute volume (Table 1). The hyperpnea continued for some minutes. The observed differences between the control readings and those during postconvulsive hyperpnea are smaller than the true values because emotional factors induced hyperventilation in the control period and the use of oxygen in the spirometer tended to diminish hyperpnea after the convulsion.

TABLE 1

AVERAGES OF THE MEASUREMENTS OF VENTILATION

	Rate	Tidal volume (cc)	Minute volume (liters)
Control period	17	718	12.2
First minute of hyperpnea.....	23	907	20.9
Second minute of hyperpnea...	24	980	23.5

Measurements of oxygen and carbon dioxide content of the femoral arterial blood of 7 patients were made during 36 experiments; the method of Van Slyke and Neill(1), slightly modified(2) was used. It was considered important to make observations on a number of different days in each case since the marked rise in venous pressure (3, 4) and the late fall in arterial pressure (3) which occur during induced convulsions occasionally resulted in a femoral venous sample being taken inadvertently. Arterial blood before electric shock contained between 15.85 and 21.45 volumes percent of oxygen with a saturation of 80.7 to 100

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percent. The averages were 18.83 volumes percent for the content and 94.3 percent for saturation (Table 2). Although some of the values for oxygen content were occasionally obtained. Fifteen samples taken during the period of post-convulsive apnea contained

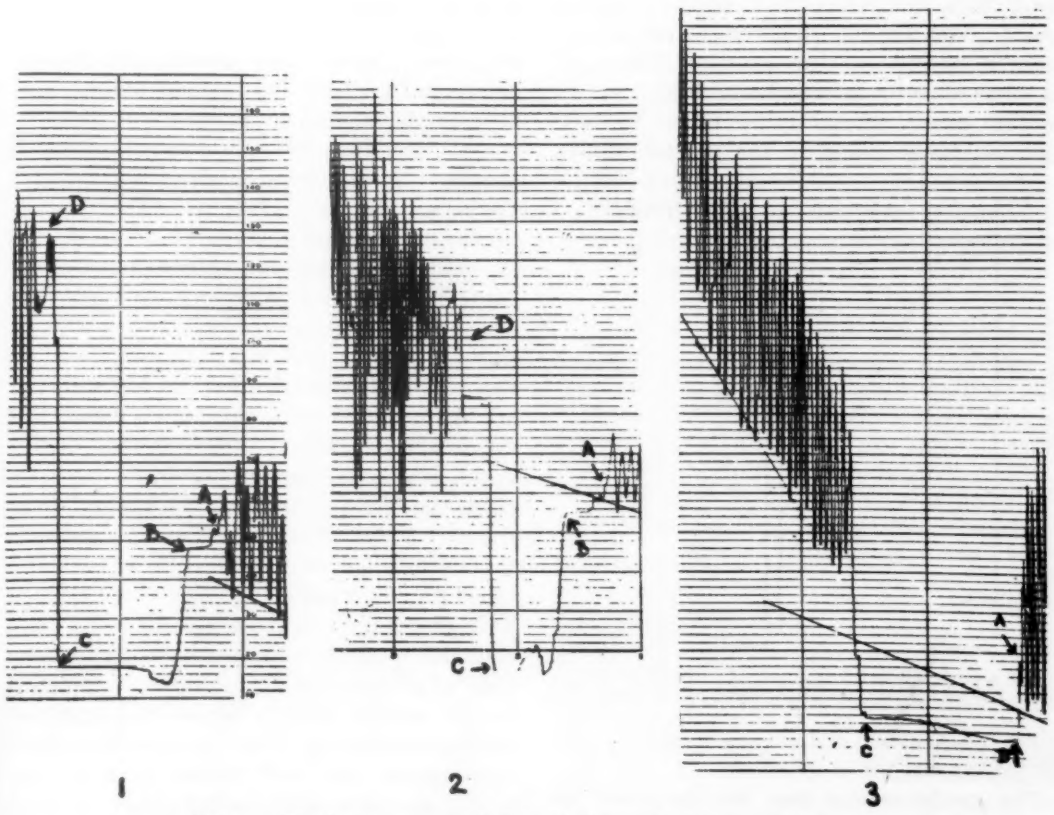

FIG. 1.—Respiratory curves before, during and after convulsions

(1) Normal respiration ceasing abruptly with electric shock (A), Onset of forced expiration during convulsion (B), after a short latent period. Relaxation (C), followed by a period of inefficient respiration (D), and then regular hyperventilation.

(2) Normal respiration ceasing abruptly with electric shock (A), Onset of forced expiration during convulsion (B), after a short latent period. Relaxation (C) followed by a period of inefficient respiration (D), and then irregular hyperventilation.

(3) Hyperventilation ceasing abruptly with electric shock (A), Onset of forced expiration during convulsion (B), with no preceding latent period. Relaxation (C) followed immediately by regular hyperventilation.

TABLE 2

AVERAGES OF ARTERIAL BLOOD OXYGEN CONTENTS

	Volumes per cent
Control period	18.83
Apnea	12.86
After beginning of respiration	15.43
Established hyperpnea	18.90

patients hyperventilated during arterial puncture, a few held their breaths so that lowered 10.23 to 15.33 volumes percent; the average was 12.86 (Table 2). Three samples of blood taken just as breathing began contained 14.70 to 19.10 volumes percent and samples taken when hyperpnea was established contained 14.71 to 19.10 volumes percent; the average of the latter readings was 18.90 (Table 2). On five occasions arterial blood obtained during the period of hyperpnea contained 0.23 to 1.27 volumes percent more oxygen than the control blood on that

day (Fig. 2). The values for oxygen content here reported are lower than those obtained by Loman, Rinkel and Myerson(3) after metrazol convulsions; these authors apparently did not obtain samples during apnea. The studies of Himwich and Fazekas(5) on arterial blood taken after convulsions due to metrazol or electric shock contain a few extremely low values far outside the range found in the present study; it is possible that these represent analyses of femoral venous blood samples taken inadvertently.

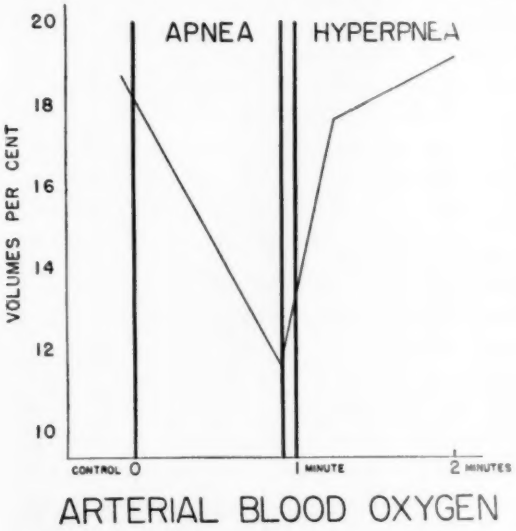

FIG. 2.—Arterial blood oxygen content in a patient before and after a convulsion.

The parallel vertical lines between apnea and hyperpnea indicate a period of inefficient respiration.

The carbon dioxide content of femoral arterial blood in the control period was between 33.85 and 48.63 volumes percent; three of the readings were below 43.2 and these were clearly the result of marked hyperventilation during arterial puncture. The average for all values was 45.16 volumes percent (Table 3), Fifteen samples taken during apnea contained 47.30 to 53.65 volumes percent of carbon dioxide; the average was 50.42 (Table 3). The carbon dioxide contents of three samples taken just as respiration began was 42.02 to 49.72 volumes percent. Samples of arterial blood taken when hyperpnea was established contained 28.55 to 44.45 volumes percent, the average being 39.10 (Table 3). These values were 0.54 to 18.40 volumes percent less than the control blood samples; the later the blood sample was taken in hyperpnea the lower the value obtained (Fig. 3). The average decrease in carbon dioxide observed during the period of hyperpnea as compared to the control value was 6.91 volumes percent. The observations of arterial blood carbon dioxide during hyperventilation after metrazol shock reported by Loman, Rinkel and Myerson(3) are in harmony with the above data. The rise in arterial carbon dioxide content during apnea is not as large as might be expected since the blood returning to the heart from the very active skeletal muscles is mixed with that returning from visceral areas in which blood flow is considerable but where there is little or no increase in metabolism during a convulsion. Moreover, much of the metabolism of the seizure is anaerobic, as attested by the marked rises in lactate and pyruvate which occur(6, 7). This increase in organic acids lowers the blood carbon dioxide combining power so that during post-convulsive hyperpnea the blood carbon dioxide content falls well below the normal level (Fig. 3).

TABLE 3

AVERAGES OF ARTERIAL BLOOD CARBON DIOXIDE CONTENTS

	Volumes per cent
Control period	45.16
Apnea	50.42
After beginning of respiration	44.91
Established hyperpnea	39.10

The pH of the arterial blood was measured in 26 experiments on five patients by means of a potentiometer with a glass electrode. The control values were between 7.30 and 7.59 and average 7.445. Immediately after the convulsion the readings lay between 6.99 and 7.25 and averaged 7.142. The decreases ranged between 0.20 and 0.39 in each experiment and averaged 0.303. During convulsive seizures induced by electric shock uncompensated acidosis occurs consequent to the accumulation of carbon dioxide and fixed organic acids (Fig. 3). More marked changes in pH than those observed are prevented by the action of buffer systems, including that associated with deoxygenation of hemoglobin. The importance of apnea in influencing the change in pH is shown by the fact that when respira-

tion is maintained artificially in animals in which seizures are induced, only small changes in pH occur (8). The post-convulsive hyperpnea changes the uncompensated acidosis of the period of apnea to compensated acidosis as carbon dioxide is blown off (Fig. 3). During and for a short time after the period of apnea there is an increase in blood carbon dioxide tension of fifty to seventy-five percent.

No conclusion can be drawn regarding the significance of the present observations in relation to the therapeutic benefit which may result from electric shock. The occurrence of anoxia during the seizure demonstrated by earlier workers is corroborated here. A number of authors consider that hypoxia, by depressing cerebral metabolism, caused the benefit observed after shock therapy. There is little aside from speculation to support this concept. Indeed Davis *et al.*(9) concluded that electric shock therapy increases the metabolism of the brain, for they observed in dogs a decrease in oxygen tension in the brain before the onset of the induced seizure. However, the results of the present study suggest that the fall in oxygen by Davis *et al.*(9) may be the consequence of the apnea which precedes and lasts through the convulsion. Similarly, the significance of the increases in carbon dioxide tension which occur during the seizure induced by electric shock is also uncertain although it may be pertinent to bear in mind that carbon dioxide is a cerebral vasodilator(10, 15), increases the flow of blood through the brain (11, 12, 13, 14, 15,) and, *in vitro*, increases cerebral glycolysis(16). It should be noted also that the increase in gastric acidity which occurs during electric shock therapy(17) might be a consequence of the hypercarbia which occurs at this time.

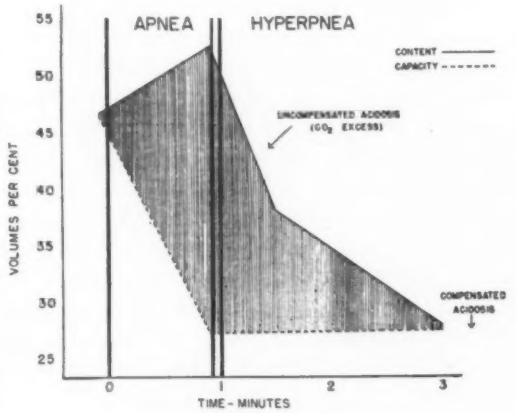

FIG. 3.—Arterial blood carbon dioxide in a patient before and after a convulsion.

The parallel vertical lines between apnea and hyperpnea indicate a period of inefficient respiration.

The full interpretation of the results of the present study depends upon the accumulation of additional information.

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A PROGRAM FOR TRAINING ATTENDANTS IN MENTAL HOSPITALS[1]

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The Committee on Psychiatric Nursing of The American Psychiatric Association has long been concerned about the training of attendants in mental hospitals. Recently this Committee and the Committee on Psychiatric Nursing of the National League of Nursing Education have conjointly agreed on a desirable course, therefore many aspects of the topic which is being discussed in this paper represents the combined thinking and efforts of these two groups.

Those who have been concerned with psychiatric nursing realize that the major part of the care of patients in many mental hospitals has been and continues to be the function of the attendant. While progress is being made in the preparation of psychiatric nurses at the professional level, attendants have made and will continue to make an essential contribution in the care of the mentally ill. The effectiveness of this contribution could be greatly increased if more attention were given to the systematic training of this type of personnel.

A study has been made of the preparation of attendants throughout the country. Many hospitals have no program of teaching for this group, some offer short courses, and some fairly thorough and complete courses. Those hospitals giving the better courses reflect the practical gain in the better care of patients.

The Psychiatric Nursing Committees of the National League of Nursing Education and of The American Psychiatric Association believe that if a relatively uniform preparation can be given, many advantages will follow. A satisfactory course of training would attract a higher type of employee and would act as a sieve in screening out the less desirable. If attendants were systematically and consistently prepared for their work, patients would receive better and more understanding care. Experience shows that on the whole the trained attendant has greater interest in his work than the untrained attendant. The engaging of attendants would be more rational if the administrative officers knew fairly accurately the degree of training the prospective employee had received. For many years there has been a Curriculum Guide for nurses but there has been no standard program of instruction for attendants, although in the majority of institutions the number of attendants in mental hospitals greatly exceeds the number of nurses.

In an effort to meet the needs in this area, the Committee on Psychiatric Nursing of The American Psychiatric Association has published and distributed a manual of training attendants. A limited number of these were printed by a special grant of private funds and more than 600 copies have been distributed free of charge to the various state hospitals, veterans' psychiatric facilities, and other institutions functioning in this field. This manual is a guide for instructors who plan courses and teach attendants. Following the distribution of the manual, the comments received indicated that a text which could be used by the instructors and attendants was necessary to complete the project. This text, based upon the manual, has been prepared and the manuscript is now in the hands of the Macmillan Publishing Company and will be available in August 1946.

The purpose of a course for the mental hospital attendant is to enable him to function more effectively in the care of patients. This should result in a better standard of care for patients and a more satisfied and better adjusted employee. The satisfaction which comes from being able to do a job well is not easily measured, but is a factor of major importance, the presence or absence of which is always reflected in the atmosphere of the hospital and the morale of the personnel.

[1] Read at the 102nd annual meeting of The American Psychiatric Association, Chicago, Ill., May 27-30, 1946.

In order to plan a course which would accomplish this purpose, the problem has been approached with certain definite objectives in view and this outline of suggestions has been prepared as a guide toward the implementing of these objectives, which are now listed:

1. To give the instructors a framework within which to plan courses.
2. To outline suggested methods for class instruction and clinical assignments.
3. To suggest content for such a course.
4. To outline a continuous plan so that one instructor may follow another without repetition or gaps. (This is especially important with the present fluid state of staffs and heavy turnover.)
5. To establish a recognized place for the attendant in mental hospitals.

This outline is by no means complete nor all-inclusive. It is prepared as an administrative tool and teaching guide that may serve as a skeleton upon which to build courses suited to local needs.

It is conceded that the duties of the attendant will vary according to the type of hospital and the quality and quantity of registered nurses on the staff. Each institution will be expected to make adjustments required by the local situation. Therefore the intent is that a basic plan be suggested as a standard, and that this plan should be flexible. For instance, in the hospital adequately staffed with registered nurses the duties of the attendants will vary greatly from those in the hospitals where the number of patients per graduate nurse exceeds a thousand. That conditions of this latter type exist is regrettable but it follows that in such hospitals certain techniques and procedures usually considered the prerogative of the nurse, of necessity must be carried out by the attendant. Therefore each hospital will have to adjust the course to fit the specific situation, and provision has been made for this.

It is recommended and strongly urged that every hospital employing twenty or more attendants establish a training program to better prepare these attendants for their work. These should not be schools where the attendant goes for study but courses for training on the job. The instructor should function in wards even more than in classrooms. The figure of twenty attendants was set because that is the number considered optimum for an instructor. Fewer, we believe, would not justify the employment of an instructor. We would welcome discussion of this point.

The responsible administrative officer should be the assistant superintendent of the hospital since in most instances he functions as the officer responsible for the engagement, separation, and discipline of attendants, and the superintendent of nurses usually refers these matters to him for final decision.

The director (instructor) of the course should be a qualified registered nurse who is under the authority of the director of nursing. She should have been graduated from an accredited school of nursing and have had desirably five years of experience in the care of mental patients. She should have had experience in teaching and preferably a college degree in nursing education. The instructor should be a person of mature judgment with ability in handling personnel. It is recognized that teaching in this field is often more difficult than in professional nursing. This is chiefly due to the lack of uniformity of background of the student-attendant-employees, and the absence of established and accepted techniques for this group. Often the attendant is not accustomed to class room work and he must be taught how to study and what to study. Under the direction of the instructor, others should be invited to participate in the teaching. Members of the occupational therapy department, the recreational department, supervisors of service, head nurses, charge attendants, and others should participate, subject to the decision of the assistant superintendent.

The qualifications for the attendants (students) should be governed by the standards for employment established by the individual institutions. Every attendant employed should be admitted to the course and those who successfully master it should have a certificate and some additional recognition of this achievement in the form of promotion or increase in salary. This would serve as a stimulus to the employee and result in a mutual gain to the hospital and the attendant. The course should be required for newly employed attendants but those employed prior

to the inauguration of this program should if possible be trained first so that all may think and work harmoniously toward the goal of better care for patients. Unless this is done there will inevitably be friction between attendants having seniority with a good service record and the newly engaged receiving training. In the final analysis the best training is "on the job" training. This cannot be attained without the full cooperation of senior attendants.

SUGGESTED CONTENT

Total time, 75 hours (three hours per week for six months)

Unit		Hours
I.	Orientation	3
II.	Special problems associated with mental patients (suicide, etc.)	10
III.	Emergencies and first aid (strangulation, etc.)	10
IV.	Ward housekeeping (general principles and specific activities)	10
V.	Personal hygiene	3
VI.	Special therapies (O.T. recreation, etc.)	10
VII.	Care of patients according to group classification (overactive, underactive, convalescent patients in continued treatment services, and patients with toxic or organic disorders.)	6
VIII.	Treatment and procedures. This unit will vary according to the duties of the attendant within the institution.	23
	Total	75

The final hour of the course should be an individual conference between the instructor and each person enrolled in the course. The assistant superintendent should, if possible, be present for a final group conference.

All time used for class should be considered as working time of the attendant inasmuch as his better preparation for the job operates to the advantage of the hospital primarily. It it is not possible from an administrative standpoint to conduct classes during the hours of duty, the time should be compensated by equivalent time off duty.

In most institutions more than three hours of class work per week for employees is not feasible. Also it has been found that six months is about the average length of time that can be given to a formal teaching period for this group of employees. It is to be expected that given a good basic preparation every attendant will continue to learn and to grow with his increasing responsibilities. For practical reasons, therefore, this course has been designed and tailored using six months as a basis. During that time it will be necessary to give the attendant a knowledge of the hospital in general; in other words, an orientation to the institution and its problems. It will also be necessary to give him an understanding of mental illness with its associated nursing problems and to develop some knowledge and skill in routine nursing procedures. Thus it can be seen that only the basic foundations of this task can be accomplished in a program of approximately 75 hours. To operate effectively, particularly during the earlier stages, the charge nurses or charge attendants on the services to which the student attendants are assigned should be consulted and encouraged to supplement the formal classroom teaching with supervised ward practice. In order to accomplish this it is suggested that conferences be held with this personnel to evaluate the efficiencies and reactions of the student attendants to the training, and also for the psychological lift most will feel if consulted.

It is proposed that certain services be used as teaching services when the training program is first initiated. This has many advantages. It gives the administrators an opportunity to select those persons with special ability and aptitude, and to assign students to these selected services, thus being assured that the new employee will be developing good attitudes as well as learning a specific content. The administrator, however, should have the belief that after a period students can be assigned to any ward or service with confidence that proper guidance will be given in practical current problems arising in the course of everyday operating routine. Since this will not be possible forthwith in setting up such a course, the following assignments are suggested to cover a six month training period:

1 month admission service.
1 month convalescent service.
1 month disturbed service.
2 months medical surgical service (including aged and infirm).
1 month special services: 1 week hydrotherapy, 1 week occupational therapy, 1 week shock therapy, 1 week physical therapy.

Under the pressure of work it is not easy to make these assignments and adhere strictly to them, however, where this has been done the results have justified the effort.

The authors do not presume to express the official views of the Association or the Committee on Nursing. They do, however, present this paper with the hope that in time courses of training for attendants in mental hospitals may be as standardized as courses in nursing presently are and may be officially accredited as nursing courses have been for many years.

BRAIN METABOLISM IN MAN: UNANESTHETIZED AND IN PENTOTHAL NARCOSIS [1]

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The first *in vivo* studies of human cerebral metabolic rate were made by Kety and Schmidt(1) who based their results on a comparison of the arterial blood with that of one internal jugular vein, the right. A further advance can be made, however, by using both internal jugular veins in the determination of cerebral metabolism, for except in the small proportion of human subjects who have torculars, the two internal jugular veins do not drain symmetrical portions of the brain(2, 3). One of the internal jugular veins carries most of the blood from the cerebral cortex and the other that from the basal ganglia, with the lower portions of the brain, however, being equally represented on both sides. Because of the different origins of the venous blood in the two internal jugular veins, by drawing blood samples from both internal jugular veins simultaneously, a differentiation can be made between them, in most instances, one being more representative of the cortex than the other.

Up to the present, there has been no work on the effect of pentothal on brain metabolism in man, though it is known that the cerebral arteriovenous oxygen difference is usually decreased by this drug(4). In the monkey, Schmidt, Kety and Pennes(5) have found cerebral metabolic rate to be lower in deep pentothal anesthesia than in more superficial depression, and observations made in this laboratory show that in the dog (6) metabolic rate, especially that of the cerebral cortex, is more depressed in the deeper stages of anesthesia. The method suggested above of drawing simultaneously arterial and bilateral venous samples afforded the opportunity to study the effect of pentothal anesthesia on brain metabolism in man and also to determine whether all parts of the brain are equally involved in any metabolic change.

METHOD

In the unanesthetized man, novocaine was injected subcutaneously over the femoral artery below the ligamentum inguinale and also where the internal jugular vein passes medially to the tip of the mastoid process. No. 19 needles with stylets were then inserted in each of the three vessels and the stylets were withdrawn from the needles only for the collection of blood samples.

Pentothal sodium in 1% solution was injected, partially by continuous drip and in part by way of syringe into an antebrachial vein. In all observations, the depth of the anesthesia produced by the pentothal was evaluated by means of clinical signs and was held constant throughout the drawing of the series of blood samples necessary for the determination of cerebral blood flow.

The procedure used for the determination of cerebral metabolic rate was that of Kety and Schmidt(1). The subject breathes through a closed system a gas mixture of 15% nitrous oxide, 21% oxygen and 64% nitrogen, with soda lime being used to remove carbon dioxide. Four series of three blood samples each were drawn simultaneously from both internal jugular veins and femoral artery: the first series from ½ to 1½ minutes after the inhalation of the nitrous oxide mixture began, the second from 3½ to 4½ minutes, the third from 6½ to 7½ minutes,

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and the fourth group of samples from 9½ to 10½ minutes. Any discrepancy in the time between the collections of the blood was noted. The samples of blood were kept under glass and over mercury so there could be no contaminating exchange of gases with the air. The blood samples were analyzed for carbon dioxide, oxygen(7) and nitrous oxide, using Kety's modifications (personal communication [2]) of Orcutt and Waters' method(8). In some instances, it was possible to complete all analyses on the same day in which the bloods were taken, but when this could not be accomplished, only nitrous oxide determinations were left for the succeeding day. From the values of nitrous oxide, cerebral blood flow was calculated on a basis of 100 gm. of tissue/minute and from the determinations of oxygen, the cerebral arteriovenous oxygen difference was found. Multiplying one of these factors by the other yields cerebral metabolic rate, which is expressed as cc. oxygen/100 gm. of cerebral tissue/minute. In the remainder of this paper the full designation will not be made, only the number will be presented and cc. oxygen/100 gm. of tissue/minute is to be understood. A difference in cerebral metabolic rate of 0.3 or more is considered significant because duplicate observations of the same internal jugular vein and artery in 7 resting subjects, obtained from the observations of Kety and Schmidt(1), as well as our own, reveal an average difference of 0.27. A similar analysis of cerebral blood flow shows a difference of 8 cc. of blood/100 gm. of tissue/minute as being significant. As previously established(9, 10) cerebral arteriovenous oxygen differences of 1 vol. percent or less are usually observed in the quietly resting patient. In our subjects a correlation was made between the stages of anesthesia and cerebral metabolic rate. The various stages of pentothal anesthesia will be described in detail in other communications(11, 11a). For the present purposes, it is sufficient to present in outline form the progressive stages of anesthesia, which are arranged according to clinical signs and depend in part upon a descending metabolic inhibition of the brain, beginning with the cerebral hemispheres and extending in a caudad direction to the medulla oblongata. In this outline, the depth of anesthesia is indicated by stage number, name, neuroanatomic allocation and distinguishing clinical signs.

Stage I. Clouding of consciousness. Depression of cerebral hemispheres.
Environmental contact, the performance of voluntary activities and learned reactions are impeded.

Stage II. Hypersensitivity. Slight depression of subcortico-diencephalon.
This stage begins with loss of contact as the patient becomes unconscious. A painful stimulus evokes an inept, but exaggerated, response, a sign of thalamic release.

Stage III. Surgical anesthesia.

Plane 1. Light anesthesia. Moderate depression of subcortico-diencephalon.
Muscular response to pain is still present, but greatly diminished.

Plane 2. Moderate surgical anesthesia. Slight depression of midbrain.
Nocuous stimuli bring on only visceral reactions in terms of pupilary dilatation and respiratory changes.

Plane 3. Deep surgical anesthesia. Moderate depression of midbrain.
Pain produces no apparent change.

Stage IV. Impending failure. Depression of pons and medulla.
The predominant signs are extreme depression of respiration and diminution of pulse pressure.

Further progress in depth of anesthesia would affect the vital centers still more and lead to the dangerous fifth stage of medullary failure.

RESULTS

The results are presented in Tables 1A and 1B, which include the stages of anesthesia and the cerebral arteriovenous oxygen difference, blood flow and metabolic rate, determined by comparing blood samples from the femoral artery with others from the right and left internal jugular veins. In 4 of the 5 control (unanesthetized) observations (Table 1A), in patients Nos. 1-4, the right and left arteriovenous oxygen differences were within the experimental error of 1 vol. percent. An agreement, however, fails in every case between the blood flow of the right and left internal jugular veins. In patient No. 1, the right side has a significantly faster blood flow than the left, *i. e.*, 81 cc. blood/100 gm. of tissue/minute as against 60

[2] We gratefully acknowledge Dr. Kety's suggestion on the methods of N_2O analysis and calculation.

cc. blood/100 gm. of tissue/minute. In the other three patients, the left is greater than the right. As a result of this difference in cerebral blood flow on the two sides, the right or left internal jugular vein, but in both experiments of patient No. 2, a slowing of blood flow occurred only on the left side. The change on the right was not significant

TABLE 1A

EFFECT OF PENTOTHAL ANESTHESIA ON BRAIN METABOLISM IN MAN

1	2	3	4	5	6	7	8
			Right			Left	
Subject No.	Stage of anesthesia	AVO_2	C.B.F.	C.M.R.	AVO_2	C.B.F.	C.M.R.
1	Unanesthetized	5.20	81	4.2	4.34	60	2.6
	III, 3	7.02	34	2.4	5.85	36	2.1
2	Unanesthetized	5.51	47	2.6	7.10	56	4.0
	III, 1	4.78	51	2.4	5.44	47	2.6
	Unanesthetized	4.45	61	2.7	5.15	72	3.7
	III, 2	3.46	73	2.5	2.84	43	1.2
3	Unanesthetized	3.70	79	2.9	4.47	90	4.0
	II	4.34	62	2.7	2.88	48	1.4
4	Unanesthetized	3.67	70	2.6	3.95	89	3.5
	III, 1	4.22	40	1.7	4.93	38	1.9

TABLE 1B

EFFECT OF PENTOTHAL ANESTHESIA ON BRAIN METABOLISM IN MAN

1	2	3	4	5	6	7	8
			Right			Left	
Subject No.	Stage of anesthesia	AVO_2	C.B.F.	C.M.R.	AVO_2	C.B.F.	C.M.R.
5	I	6.22	64	4.0	7.62	37	2.8
	III, 1	5.48	34	1.8	7.16	37	2.7
6	II	3.06	80	2.4	2.76	46	1.3
	III, 2	3.37	44	1.5	3.11	42	1.3
7	III, 2	3.60	61	2.2	3.98	44	1.8
	III, 2	5.98	35	2.1	4.25	39	1.6
8	I	4.57	84	3.8	4.76	72	3.4
	III, 2	3.75	72	2.7	3.66	76	2.8
9	III, 2	3.89	54	2.1	4.89	60	2.9

In column 2 may be found the stage of anesthesia in Roman numerals and the plane in Arabic numbers. Columns 3 and 6 refer to the arteriovenous oxygen difference. Cerebral blood flow, columns 4 and 7, is given in terms of cc. blood/100 gm. cerebral tissue/minute. Cerebral metabolic rate is expressed as cc. oxygen/100 gm. tissue/minute. The figures of column 5 are the products of those in columns 3 and 4, and similarly, the values in column 8 are the products of columns 6 and 7. The right and left values are those obtained by comparison of the arterial blood with that of the right and left internal jugular veins, respectively.

cerebral metabolic rates as measured by both arteriovenous oxygen difference and cerebral blood flow are not equal. The higher values average 3.9 and the lower ones, 2.7.

Pentothal anesthesia induced a decrease in cerebral blood flow in patients Nos. 1, 3 and 4 (Table 1A), whether determined from the in the first observation and in the second disclosed an increase. When, however, both arteriovenous oxygen difference as well as blood flow are taken into consideration in the calculation of cerebral metabolic rate, it is found that in every instance the cerebral area with the higher metabolic rate in the control

observation decreased with pentothal anesthesia. For example, in subject No. 1, the cerebral metabolic rate on the right was 4.2 and decreased to 2.4 during anesthesia, a difference of 1.8. On the left side, cerebral metabolic rate fell only 0.5, from 2.6 to 2.1 In the first observation on patient No. 2, on the right cerebral metabolic rate was diminished by 0.2, an insignificant difference. On the left, however, the decrease was greater, 1.4. Thus, the metabolic rate of the cerebral part which was lower before anesthesia either revealed no slowing or a decrease which was less in magnitude than that of the other side.

Among the instances (Table 1B) in which observations were made only under pentothal, in patients Nos. 5 and 8, the first one was obtained when the subject was in the first stage of pentothal anesthesia and still retained some imperfect contact with the environment. It will be noted that the values in this stage are approximately the same as those on unanesthetized subjects. In the other observations of these two patients, as well as those of patients Nos. 6, 7 and 9, the anesthesia was deeper.

DISCUSSION

Comparison of Metabolic Rate of Cortex and Subcortex in Unanesthetized Subjects.—In the unanesthetized subject, cerebral metabolic rate is greater when calculated from the results on one internal jugular vein than from the other. This difference between the two sides bears no relation to the cerebral arteriovenous oxygen difference and must, therefore, be ascribed to a faster blood flow through one portion of the brain than the other. These observations involve two interconnected questions: first, do the various parts of the brain have characteristic rates of blood flow; and second, do the metabolic rates of the different cerebral areas vary among themselves? Previous work on excised cerebral tissues from various mammalian species(12, 13, 14) has revealed that different parts of the brain possess different metabolic rates and that, on the whole, the newer phyletic and higher anatomic areas exhibit faster metabolism than the more caudad regions. For man, the literature affords indications that the same may apply. For example, during hypoglycemia it takes a larger dose of glucose to restore cortical functions than those of the basal ganglia(15). The present observations reveal that calculations made on blood drawn from one internal jugular vein has a higher oxygen consumption than the other, for on one side they averaged 3.9 and the other 2.7. The results not only furnished functional proof for the asymmetrical cerebral venous return but they also show that the cortical metabolism is higher than that of the rest of the brain.

Because the blood of one internal jugular vein carries other contributions in addition to most of that from the cerebral cortex, 3.9 may be regarded only as an approximation to the metabolic rate for that portion of the brain. The rate of the cerebral cortex must be greater because the internal jugular venous samples also contain blood coming from the lower cerebral areas with slower metabolic rates. In the dog(6), for example, with blood drawn directly from the superior longitudinal sinus, the average metabolic rate is 5.9. If this fast metabolism is not due to a species difference, it may be ascribed to the cortex uncontaminated by a subcortical influence.

The faster cerebral blood flow in the cerebral hemispheres can be explained by a larger number of capillaries than in the subcortex. Craigie (16) and Dunning and Wolff(17) have concluded that the parts of the brain with the higher metabolic rates contained the greater capillary population. In a word, vascular structure is adapted to the metabolic needs of the cerebral part.

Total Cerebral Metabolic Rate in Unanesthetized Subjects.—When results from the right and left sides are averaged, the metabolic rate is 3.3, close to the figure of 3.7 obtained by Kety and Schmidt(1). It is interesting that similar or lower values may be calculated by applying determinations of excised cerebral tissues. Taking an average brain weight in the male of 1350 gm., a weight relationship of grey and white matter of 3:7, and an oxygen utilization of 3 cc. per gram of grey matter per hour, and of 1.5 to 0.75 cc. per gram of white matter per hour, depending upon whether the oxygen

intake of white matter is ½ or ¼ that of grey (18), the total oxygen consumption of the brain is found to be within the extremes of 2632 cc. per hour and 1924 cc. per hour. The values per minute for the whole brain are 44 cc. and 32 cc., or per 100 gm. of tissue, 3.3 cc. to 2.5 cc. If the metabolic rate obtained in excised tissues represents only the maintenance requirement, then the somewhat higher ones observed in the present experiments may represent both maintenance metabolism and an increase due to function, an increase which is present even in the resting individual.

Cerebral Metabolic Rate During Anesthesia.—The average metabolic rate for all observations made during the second and third stages of anesthesia (Tables 1A and 1B) is 2.1, a reduction of 36% from the average control value of 3.3. Not only is cerebral metabolic rate depressed by pentothal anesthesia (Table 1A), but when two different stages of anesthesia were produced in the same subject, the metabolic rate is always lower in the deeper stage (subjects Nos. 5, 6 and 8 of Table 1B). In subject No. 7, both observations were made in the same anesthetic stage and they did not reveal any significant difference in cerebral metabolic rate. For these reasons, it may be concluded that a factor which controls the depth of anesthesia is the degree of metabolic inhibition.

From the observations on the unanesthetized subject, we have seen that the venous drainage containing a larger fraction of the cortical component reveals a higher metabolic rate, and if this is the case, then it is also true that it is the cerebral cortex which is most depressed in pentothal anesthesia. The caudad portion of the brain, including the medulla, suffers a smaller metabolic depression. This conclusion receives support from observations on cerebral tissues excised from the rat, in which the metabolism of discrete cerebral portions could be measured (12). In the presence of pentobarbital, in 0.012 percent concentration, the oxygen intake of the cerebral hemispheres was inhibited to a greater extent than that of any other part of the brain. The primary effect of pentothal is, therefore, that of a functional decortication and only later are the lower centers involved. Irrespective of the pattern in which pentothal depresses metabolism, these results make a contribution to the theory of narcosis, for they show that part of the narcotic mechanism is a histotoxic anoxia; a depression of cerebral cellular respiration. This work extends to man the observations made on monkey and dog and helps to establish on an *in vivo* basis the conclusion first drawn by Quastel (19) from his work on excised tissue.

Metabolic inhibition does vary with depth of narcosis but the extent of the inhibition is inadequate to explain the entire anesthetic effect. This inadequacy is seen on comparing the metabolic depression observed in hypoglycemic coma (20) at the time when environmental contact is first lost, stage II, with the metabolic depression of either the second or third stage of pentothal anesthesia. If we may take the observations on cerebral blood flow obtained by the thermostromuhr as being sufficiently indicative, then brain metabolism is depressed to 38% of its original value in the second stage of insulin hypoglycemia. On the other hand, in the present experiments, the average oxygen intake for all observations made in anesthesia, including both second and third stages, is 64% of the control values. The metabolic inhibition of insulin hypoglycemia is, therefore, considerably greater than with pentothal anesthesia. Other work shows that another factor, interference with nerve function, in addition to metabolic impairment, occurs with pentothal anesthesia. An example is the effect of some barbiturates to inhibit the vagal slowing of the heart. This interference with nerve function is similar to the paralyzing influence of atropine on parasympathetic nerves and curare on motor nerves. It would seem that there are two fundamentally different ways of interfering with cerebral activity: one involves a depression of nerve function without necessarily influencing energetic exchanges; the other is metabolic in origin, as in hypoglycemic coma and is caused by the removal of the substratum of energetic support required for the maintenance of nerve function. Pentothal occupies an intermediate position, obtaining its influence both by metabolic inhibition and by obtunding nerve function.

This bipartite basis of pentothal anesthesia is also revealed by an examination of the clinical signs, which is presented elsewhere (11, 11a). But even from the information given before it would seem that the order in the appearance of most of the clinical signs and of their neuroanatomic allocation may be ascribed to a metabolic inhibition starting in the cerebral hemispheres and gradually extending to include the lower brain areas. The factor of interference with nerve function, which is exerted by the barbiturates upon the hypothalamic mechanisms, is made apparent by the absence of the wild excitement usually seen in the second stage of ether anesthesia or other volatile anesthetics, as well as in hypoglycemic coma. Similarly, motor activity, so prominent a feature of hypoglycemia, is blotted out by pentothal. We do not know whether interference with nerve function takes place in any given sequence, but the clinical signs of progressive pentothal anesthesia are best explained by a combination of nerve inhibition superimposed upon the medullary depression, which exhibits a pattern of phyletic regression.

Relation Between Cerebral Metabolic Rate, Cerebral Blood Flow and Cerebral Arteriovenous Oxygen Difference.—The relationships between cerebral arteriovenous oxygen difference, cerebral blood flow and cerebral metabolic rate reveal the physiologic adaptations to metabolic impairment caused by pentothal. The changes in arteriovenous oxygen differences and metabolic rates are in the same direction, *i. e.*, both diminished in 12 of 18 observations, or 67%. If, however, the 3 observations are omitted in which cerebral arteriovenous oxygen differences increased, then the agreement is even better, 80%. From previous work(4), we know that arteriovenous oxygen difference decreases with deepening anesthesia until a precipitous drop of cerebral blood flow occurs, at which time arteriovenous oxygen difference enlarges despite a growing metabolic depression.

A comparison between cerebral blood flow and cerebral metabolic rate reveals an equally good correlation as does the one between cerebral arteriovenous oxygen difference and metabolic rate, for the directional changes are the same in 13 of 18 observations, or 72%. In the majority of observations, therefore, it may be said that both cerebral blood flow and cerebral arteriovenous oxygen difference decrease during pentothal anesthesia. A smaller cerebral arteriovenous oxygen difference, despite a slower blood flow, can only be caused by an interference with the oxidative process, and it is also probable that the inhibition of cerebral oxidations is one of the factors which determine the fall in cerebral blood flow.

The correlation between the fall of metabolic rate in any part of the brain and the decrease of its blood flow is in agreement with the conception that the metabolism of the brain is a potent factor in the intrinsic regulation of cerebral blood flow. The inherent vasoconstrictor activity of the arterioles and capillaries is counteracted to a lesser degree during anesthesia because the products of nerve metabolism, carbon dioxide, lactic acid, acetylcholine, etc., all vasodilators, are formed in smaller amounts when metabolism is depressed. Horsley's observations (21) seem to support such a conclusion. He injected into a large group of patients one of four barbiturates, pentothal, evipan, nembutal and soneryl sodium. In 29 of the 30 observations with pentothal and all the observations with the other barbiturates, he observed a fall in cerebro-spinal fluid pressure. This steep fall of cerebro-spinal fluid pressure is accompanied by a sudden loss of consciousness but is not observed with subhypnotic doses of the barbiturates. As Beecher(22) suggests, the decrease in cerebro-spinal fluid pressure may be due to a contraction of the intracranial blood vessels. The contraction is probably limited, however, to the vessels in the parts of the brain which are narcotized, for it is not observed in the pial vessels(23). Finally it should be pointed out that pentothal anesthesia produces a steeper decrease in blood flow in the cerebral hemispheres than in the lower parts of the brain.

CONCLUSIONS

1. The effect of pentothal anesthesia was examined in 9 subjects on whom 19 observations were made. Blood was drawn simultaneously from the right and left internal

jugular veins and the femoral artery in order to determine the right and left cerebral arteriovenous oxygen differences and the right and left cerebral blood flows, which were measured according to the method of Kety and Schmidt to calculate cerebral metabolic rate. When results from both right and left sides are averaged, the oxygen consumption of the brain in the unanesthetized man is 3.3 cc. oxygen/100 gm. of tissue/minute. This value, however, represents two groups: a higher one with 3.9 cc. oxygen/100 gm. of tissue/minute and a lower with 2.7. Because of the asymmetric venous return, the cortical component usually appears preponderantly in one of the two internal jugular veins and it is concluded that the portion of the brain with the higher metabolic rate is the cortex.

2. In every instance, pentothal anesthesia induced a depression in metabolic rate. The average during the second and third stages of anesthesia is 2.1 cc. oxygen/100 gm. of tissue/minute, a reduction of 36% from the control value. The pattern of pentothal anesthesia shows that cortical oxidations are depressed earlier and more profoundly than those of the rest of the brain, which in turn may also be subjected to metabolic inhibition.

3. Because of some effects of pentothal, which cannot be attributed to metabolic inhibition, it is concluded that pentothal narcosis is on a bipartite basis, including metabolic depression as one factor and inhibition of nerve function as another. The clinical signs of pentothal narcosis can be best explained on this bipartite basis.

4. In the resting individual, the high metabolism of the cortex is correlated with its rapid blood flow. It is probable that the parts of the brain with the higher metabolic rates possess a greater vascular complement and that this is a structural adaptation to metabolic requirements. On the other hand, the retarded cerebral blood flow observed with pentothal anesthesia is functional and in part is a response to a decreased metabolic rate. The depression of metabolism induced by pentothal alters both the cerebral arteriovenous oxygen difference and cerebral blood flow. In most instances, both are decreased and, therefore, each of these factors is modified to account for the fall in cerebral metabolic rate.

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EMOTIONS IN THE ALLERGIC INDIVIDUAL

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When a conclusion has been reached after taking into consideration the known facts, the correctness of that conclusion is judged by its ability to explain what happens in the problem or disease under consideration. When it fails to do so we are compelled to re-examine our facts; or, if others have come to light, add this new knowledge to the former and thus arrive at a better or more logical conclusion.

The history of medicine is full of conclusions or explanations which, for the above-mentioned reasons, have been found erroneous or only partially correct and therefore have had to be changed. This truth applies to all branches of the healing art, and allergy is no exception, in spite of its relative youth.

Many things happen to allergic individuals which I cannot explain on the basis of our conclusions that increased or decreased exposure to allergic substances causes a precipitation of the given symptoms or a cessation of them.

Physical complications entering the picture of allergy are well known. Those which the allergist commonly looks for are cardiac conditions, infections, blood dyscrasias and trauma; but a complication I find more frequent than all those put together is rarely considered, and one finds scant reference to it in the literature on allergy.

The experiment of producing an attack of hay fever by placing the patient in contact with artificial roses was performed many years ago. I repeated it in the following manner:

A spray of goldenrod was placed in an inconspicuous place in a psychiatrist's office. The patient, a psychoneurotic, who upon learning I was an allergist had previously told me about the violent hay fever he suffered as "due to goldenrod," sat in that office for fifteen minutes, talking and breathing normally. The month was June. Suddenly he spied the goldenrod, jumped out of his chair and started a terrific sneezing spell, pointing accusingly at the goldenrod. His nose ran; his eyes watered and reddened. I took him into the examination room, where I found that his nasal membranes were swollen, œdematous and pale grey. Taking him back to the office, I showed him that the spray of goldenrod was artificial and made of paper. Within five minutes his nasal congestion ceased.

These results, I repeat, are common knowledge, but I do not think that sufficient significance has been attached to them. Since exposure to allergens cannot account for the spell, nor removal of allergens account for its cessation, we must look for another explanation. Although a reaction explained on the basis of fear, emotion or fixed ideas may not be correct, it is more logical than the exposure idea. Psychiatrists tell us that somatic manifestations often, if not always, take the route to the organ or organs to which the patient's attention has been previously drawn. Thus a cancer phobia can usually be traced to a deep and lasting impression the patient has previously had of cancer. A friend or relative who died of cancer, or a medical article on cancer starts the phobia. The same holds true with a "heart phobia" or cardiac neurosis.

Now, if this is true—and I see no reason to doubt such logic—why can the same set of circumstances not apply to allergic manifestations such as asthma, hay fever or hives?

We believe most atopy is inheritable. Certainly it runs in families. Now, whether hereditary or environmental, why should not a deep dread of a recurrence of asthma or hay fever be present in an individual who has suffered a previous attack? And those who are allergic and have not as yet had a spell, do they not hear or see others in their families suffer attacks more often than persons raised in non-allergic environments? Why could not fears concerning these organs be formed in a way exactly paralleling the cardiac neurosis, the tuberculosis fear or the cancer phobia? I think it is logical to assume that they not only can, but do. An attack of

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asthma makes a deep and fearful impression, not only upon the victim but also upon the innocent bystander or witness.

It is only by the mechanism involved in the experiments with the goldenrod and roses that I can possibly explain some of the results of my allergic tests and treatments over a period of seventeen years. And I mean not only my poor results, but also some of the good ones.

Case Report.—Mrs. B. History of asthma and hay fever since childhood. She was also a severe psychoneurotic and abnormally "afraid of needles," meaning hypodermics. Tests were performed in spite of this. A sensitivity to house dust was found —intradermal and scratch tests were 2+, clinical test done by spraying dust into the nose was positive; her clinical and seasonal history also fitted into the picture. Hyposensitization to a solution of dust was started. Due to her extreme nervousness, I personally gave the first 10 treatments. Results—improvement in allergic manifestation. The eleventh dose was given by my very competent and experienced helper, Miss Tait. Within an hour a large local reaction took place at the site of the injection. At this point I started alternating the dust solution with a mixed bacterial vaccine. Without exception, a large and painful local reaction occurred every time Miss Tait gave the injection and never when I gave it. One point I wish to make clear. I taught Miss Tait how and where to give these injections and her technique is exactly the same as mine. Fifteen times we repeated the experiment—I would give one injection, then Miss Tait the next. Then I would give two or three and the next two or three she would give. We did not even vary the concentration of these doses. The results were always the same. If anyone can explain this large local swelling on an allergic basis, only when Miss Tait gave the injection, I would certainly be glad to consider such reasoning. I cannot.

Then came the following story. The patient was in a doctor's office four years previously. The doctor ordered his nurse to prepare and give her a hypodermic (contents unknown). The nurse gave the injection. Two minutes later the nurse burst into the office and in the presence of the patient screamed, "Oh, doctor, I gave her the wrong hypodermic!" The patient immediately fainted and later had a hysterical spell. The doctor then gave her a hypodermic which, she told me, "stopped all the bad effects of the nurse's criminal mistake." She admitted to a terrific fear of medicine given by a nurse, but felt secure "when a doctor gave it."

As a physician who for thirty years has stressed physical explanations for physical phenomena and symptoms, it is difficult for me to believe that a migraine can be caused by a former emotional experience. And to *see* an actual swelling with redness and local heat and try to explain it on the basis of a phobia response certainly taxed my credulity. But what other explanation is there?

If a fear or fixed idea concerning roses or goldenrod can, and apparently does, precipitate a condition which is or resembles hay fever, why, then, is it not logical to assume that definite fears of needles, milk, strawberries and a host of other things may act in the same way.

Escape mechanisms or a feeling of security minimize psychoneurotic manifestations. I have observed many cessations of allergic manifestations which could only be explained on this basis. I shall mention a few.

Since I am the only physician in Florida specializing for a long period of time in allergic diseases, naturally I have patients referred from distant cities. I have watched these individuals carefully. Just as in the case of a shrine, the security build-up given these patients is impressive to them. So I hear them say, "At last I feel that I'm going to get rid of this asthma (or hay fever). Doctor, I've heard so much about your marvelous results!" One can actually see many of them relax. I take their history, examine them, then *start* the tests. At least twenty percent report that they slept well that night, and many ascribe it to my first treatment. And yet I have given them no treatment or medication.

In another group of 150 such cases I have substituted a mixed vitamin tablet or a pure placebo for their adrenalin or ephedrine, and it is amazing to me to note the big percentage who obtain relief from these "tablets." I cannot explain these results on any other basis than that of a security idea.

Now I return to my original contention. Every allergist has had similar experiences but I repeat, not enough significance has been attached to them. I can see no logic in the assumption that an individual will not respond to a conditioned reflex simply because he is allergic.

I wish to emphasize that the conclusions I have reached in the cases cited were not arrived at without due consideration, knowledge and investigation of the allergens concerned in these cases. The purely allergic angle is always thoroughly explored, and assumptions of a so-called functional condition are made only after all efforts at finding a physical cause have failed.

That a state of altered reactivity, *i. e.*, allergy, exists I do not doubt. But I am equally certain that the examples I have given explain many of the failures and successes of allergic treatment, either because the complicating neurotic factors are not or cannot be overcome or because we endeavor to treat in an allergic way manifestations which are purely psychoneurotic.

In the preface to his book, "Nervousness, Indigestion and Pain," Alvarez states: "The gastroenterologist just has to be a psychiatrist of sorts." I feel that this statement applies with equal force to the allergist.

Recent scientific investigations have added much to our knowledge of the mechanism involved in allergic reactions. To ignore these findings would be the height of folly, but there are gaps in our knowledge and the biggest ones seem to be in the field which allergists designate as non-specific exciting causes or secondary complications.

Every allergist knows from bitter experience that when the weather suddenly changes from warm to cold, a large percent of his patients have attacks of asthma and hay fever, without a demonstrable increase in allergic exposure. An almost exact parallel exists in the field with which this paper deals, *i. e.*, emotions. These things happen. Why? I do not think that this question can be answered until the exact mechanism of allergic reactions is understood, and the exact mechanism of the effect of change of temperature is established and the two are correlated. The same holds true for emotional changes.

Until this is done the practical man must look upon these questions as academic, but this should not prevent him from doing all in his power to prevent his allergic patients from becoming chilled or to see that an emotional cause or complication is properly treated and if possible eliminated.

The main effects I wish to call attention to, however, are those which interfere with allergic treatment, or cause complications which call for differential diagnosis.

Phobias and fixed ideas concerning various foods are common in the neurotic. Try to tell a patient who is "convinced that she is allergic to milk" that in her case such an allergy does not exist, and see how far you will get. Most of them promptly state that your tests are all wrong, and not only disbelieve the skin and clinical tests for milk, but also every other test one does. Try to give adrenalin or ephedrine to patients who have heard for years that these drugs "hurt the heart" and the results will be the same.

So, all day long I hear stories that "I'm sensitive to all medicines," "I can't take hypodermics." I am told of "reactions" to hyposensitization treatment which are wide-spread and bizarre. I hear positive statements that "the orange tree in the neighbor's yard causes my hay fever," "the salt air makes me worse," or sometimes "better." Due to these phobias and fixed fear ideas, I am frequently left without a single drug or treatment to give for relief.

My observations over a period of many years have led me to the conclusion that many of the apparent benefits of change of climate in asthma are due to psychological reasons. These results are often temporary. Return attacks are explained usually on the assumption that they "wore out their welcome" or they became sensitized to other things in the new climate. This explanation undoubtedly is true in some cases, but a large number have return attacks in whom I cannot demonstrate a new sensitivity. Many of these latter cases tell stories of dissatisfaction with Florida climate, they miss old friends, associations and scenes. Often the bread winner has to make a financial sacrifice by accepting a position which is inferior to the one he had before moving to the new climate. The maladjustments effect their general health, and I believe this factor accounts for many of the return visitations of allergic troubles. I think that these factors, if strong, prevent good results although the predominant allergen in a certain case is minimal or totally absent in the new climate.

Every allergist needs help in many cases from general practitioners, eye, ear, nose and throat men, internists, surgeons and others. By using such aids, results in the treatment of allergic individuals are better. The same reasoning would apply to psychiatry. It is my opinion that if this emotional complication was recognized and given proper treatment more often than is now the case, many previous failures could be converted into successes.

PSYCHOLOGICAL FACTORS IN MEN WITH PEPTIC ULCERS[1]

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INTRODUCTION

Folklore abounds with expressions illustrating the relationship between emotions and stomach functions. Within recent years physicians have recognized that emotional factors play an important rôle in patients with peptic ulcer(1) and a number of observers have indicated that such patients have a distinct and predictable type of personality (2). This point of view is epitomized in the characterization of the ulcer patient as an active efficient business man, the go-getter type, who eats a hasty lunch at his desk surrounded by three telephones. However, Alexander and his co-workers at the Chicago Institute for Psychoanalysis, working intensively with a small group of patients, pointed out that what was characteristic of their patients was not so much a specific personality type as a typical conflict situation(3). They showed that ulcer symptoms appeared in association with intense oral-receptive tendencies which were either repressed due to a sense of inferiority or guilt, or were externally thwarted. Alexander has stressed the relationship between the wish to receive, to be taken care of, to be loved; and the function of eating. Such desires are most ideally gratified in the parasitic state of the suckling infant so that they become closely associated with the physiological function of nutrition. Being fed thus becomes emotionally equated with being loved. If, during a later period of life, the intense wish to receive or to depend upon others is rejected by either the adult ego or the external world, it may become converted into the wish to be fed. Alexander has hypothesized that the repressed or frustrated longing to receive love and help activates the autonomic innervation of the stomach which since birth is closely associated with the most primitive form of receiving something, namely food. The stomach under such persistent stimulation behaves constantly as it does normally in the hungry individual with the result that chronic hypersecretion, hypermotility and hyperemia are thought to be the consequences.

Some of these speculations have been corroborated in the recent experiments performed by Wolf and Wolff who demonstrated a correlation between human stomach functions and emotional attitudes(4). These authors further showed that when the stomach was stimulated by emotional factors it was extremely susceptible to slight trauma and subsequent ulcer formation. Alexander's hypothesis of the relation of stomach functions and emotional states through the autonomic nervous system has recently been put to a therapeutic test by several groups of surgeons who treated intractable cases of peptic ulcer by sectioning the vagus nerves(5, 6). Healing of the ulcer and relief of pain was usually dramatic, but follow-up studies have not been of long enough duration to test the permanency of their results.

In routine psychosomatic work-ups of patients with peptic ulcer in the Cincinnati General Hospital it soon became apparent that many of our patients did not have the type of personality classically associated with peptic ulcer. The purpose of this study is to report our findings in men with peptic ulcers in regard to both overt personality characteristics and conflict situations.

MATERIAL AND METHODS

Twenty men with peptic ulcers were studied from the psychosomatic point of view. Each patient was interviewed from three to eight times by a psychiatrist in

[1] Read at the 102nd annual meeting of The American Psychiatric Association, Chicago, Ill., May 27-30, 1946.

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addition to having a thorough medical work-up. Additional data were obtained from relatives or friends in the majority of instances. The patients were unselected in respect to overt personality characteristics or conflict situations. Sixteen of them had been studied on the medical or surgical wards for presentation at our weekly psychosomatic conference and were selected only on the basis of a proven diagnosis of ulcer and an intelligence that permitted adequate interviews. Three patients were referred from the medical clinic because of failure of medical treatment, and one patient was a psychiatric clinic patient whose chief difficulty was chronic alcoholism. Their ages ranged from 17 to 54 years. Eighteen of the patients had been hospitalized at one time or another for a complication of peptic ulcer, either perforation, hemorrhage, intractable vomiting or persistent pain. Eighteen of the patients were white and two were negroes. Sixteen of them had duodenal ulcer, one had a gastric ulcer, one had both types of ulcer, while in two patients the location of the ulcer was not definitely determined. Perforation occurred in five patients, hemorrhage in seven, and one patient had both of these complications.

Results

We found a wide variation in the external personality characteristics of our patients. Although all of them had conflict over intense dependent desires, they utilized a number of very different defense mechanisms to deal with this conflict. On this basis we were able to delineate three groups of patients.

Group I (Six Patients).—These patients coincided with the usually accepted type of ulcer personality in that they were outwardly independent, hard-driving and successful. However, in each instance it became obvious that such overt behavior was an over-compensation for deeply repressed, intense receptive desires. The following case report is representative of this group.

Case 1.—(J. S.) The patient was a 26-year-old, white, business man who came to the hospital with a bleeding duodenal ulcer. His life story was illustrated in his own words. "I've always tried to make something out of myself. I didn't want my children to go through what I have." The patient was an extremely ambitious, hard-working man who prided himself on his independence. His father died when he was only a year old, and although his mother remarried and had 5 more children, he remained her favorite. His childhood was characterized by severe and prolonged economic insecurity. At the age of eight he started working and always held at least two jobs at the same time since then. He married an emotionally immature girl on whom he felt dependent, but continued to aid in the support of his mother and half-siblings. He and his wife lived with her family despite the fact that he felt they did not appreciate him. Gastric symptoms were first noted when he encountered serious difficulty with his domineering and demanding mother-in-law; and his symptoms were accentuated by the births of each of his children. Several weeks before admission to the hospital the patient suffered several financial losses, and on the evening before hospitalization he had a dispute with his wife which ended when she told him to get out of the house. Shortly after this he developed a severe hemorrhage from a duodenal ulcer.

This patient illustrated how strong dependent desires due to deprivation in childhood were repressed and were compensated for by an over-determined independent attitude. However, ulcer symptoms developed following the excessive demands of a mother figure (his wife's mother); at the birth of his children, when latent conflicts centering on an increase of his dependent longings were activated; and when his wife, another mother figure, actually rejected him.

Group II (Five Patients).—These patients had a very different personality façade from the first group. Each of them had been fairly successful, but was outwardly meek, shy and often quite effeminate. Again we found the same underlying conflict situation over intense dependent desires, but in this group the dependent longings seemed to be at least partially conscious. Such desires were satisfied in these men by overtly depending on a mother or mother substitute, yet they managed to make a partial effort in the direction of masculinity and independence. They were able to limit their dependent desires in relation to their environment, and they were often able to receive gratification by feminine identifications. The two following case reports illustrate this group of patients.

Case 2.—(C. C.) The patient was a 17-year-old white school boy, admitted to the hospital with a perforated prepyloric peptic ulcer. He was born and raised in Tennessee, the fourth of five children and stated that his parents were the best in the

world and gave him everything he wanted. He always remained close to home and to mother, and was a model child. At school he was an excellent student and "teacher's pet." Epigastric distress first appeared when he entered high school and could no longer come home at noon for lunch. During a summer vacation he left home for the first time and came to Cincinnati to visit a married brother. Although homesick, he obtained a temporary job where he was well liked. His consumption of food during this period increased manyfold. A week before his contemplated return home, the patient received a telegram stating that his mother was gravely ill. He asked his employer for his wages so he could immediately return home, but his boss refused to pay him until he had finished out the week. He met this decision of his boss without outward or even conscious appropriate feeling or behavior. However, fifteen minutes later the patient's ulcer perforated.

This young man represented a type whose overt character was effeminate and passive, but who managed to be quite successful, both at school and at work. His unusually strong dependent desires were on the basis of over-indulgence in childhood. Gastric symptoms developed on occasions when he was threatened with the loss of his mother.

CASE 3.—(A. E.) The patient was a 52-year-old negro laborer with a chronic duodenal ulcer, unrelieved by ordinary medical treatment. He was born and raised on a farm in the South, the middle child of thirteen children. He was much attached to his mother, but as far back as he could remember, the patient felt discriminated against by his father and brothers. Although he was the hardest working and most conscientious of all the children, he felt he was not appreciated. At the age of twenty-one he married a motherly, dependable type of girl. Mild transient, epigastric distress first developed when the patient became worried over his wife's frequent childbirths. Because of lack of economic opportunity in the South, the patient moved his family to Cincinnati and obtained work in a railroad roundhouse, where he remained twenty years. His bosses gradually entrusted him with more responsibilities without commensurate salary increase. Fellow workers soon came to know that he would finish the work that they had left undone. This caused the patient to feel resentful toward them, but he was not able to summon up enough aggressiveness to object. By hard work and careful saving he and his wife built their own home and successfully raised a family of five children. Eighteen months before coming to the hospital his house burned to the ground, his wife was badly injured, and two grandchildren were burned to death. Following this disaster he began to reaccumulate his fortune, but was discouraged by increased responsibilities at his job without a raise, and by the failure of his wife to recover from her injuries. During this period symptoms of a duodenal ulcer started. Epigastric pain was experienced at work when he felt imposed upon by his boss or fellow workers, and it was accentuated at home when his wife was forced to take to her bed. She stated, "Whenever I get sick you go to pieces." In the clinic the patient impressed many observers as being a rather meek, effeminate individual. He became quite dependent on the therapist and was never able to express any aggression toward his doctors. This was illustrated by the fact that he was unable to interrupt his visits to his former doctor, "because I don't want to hurt his feelings." His ulcer healed when his wife got better and as he was able to express to his physician his resentment toward his employer and fellow workers.

This patient illustrated how early dependence on his mother and resentment to his father and brothers were later displaced to his wife and to his employer and fellow workers. His ulcer developed when he could no longer gain adequate support from his wife.

Group III (Nine Patients).—These patients showed still another type of outward personality. Each one represented a severe character disorder. Eight of them were chronic alcoholics. Many traits of the psychopathic personality were present in this group such as repetitive, stereotyped, self-destructive behavior in the form of drinking, gambling, delinquency, and inability to make a living. They expressed their strong oral cravings and demands by intense "acting out" as well as by their patho-physiological symptoms. The following case reports are representative of this group of patients.

CASE 4.—(E. H.) The patient was a 38-year-old man with a chronic duodenal ulcer which had both perforated and bled. His childhood was unhappy since before he was three years old his parents separated and he was placed in an orphanage. Later, he never got a permanent job or settled down, but drifted around the country working spasmodically as a peddler or dishwasher. His first marriage was unhappy. Ulcer symptoms and chronic alcoholism developed in conjunction with economic difficulties and incompatibility with his wife. He married a second time to a motherly type of wife, but his ulcer was reactivated and later perforated while she was pregnant. Following operation it was quiescent for a short period during which he obtained a temporary job as cook. When his employer, in desperation over the man-power shortage, made the patient night manager of the restaurant the ulcer began to bleed.

This man, whose intense receptive desires stemmed from severe childhood rejection, illustrated the type of ulcer patient who acted out his infantile urges by means of alcoholism and overt dependency on his environment. Ulcer symptoms developed when his dependency was threatened by having to share his wife with a new baby and when his boss tried to force more responsibility upon him.

CASE 5.—(O. C.) The patient was a 28-year-old white chronic alcoholic and gambler, admitted to the hospital with a bleeding duodenal ulcer. His father had emigrated from Italy and had become financially successful in this country. The patient was told by his father, "You were breast-fed for a little too long because you were your mother's first born and she liked to indulge you." His childhood was happy and his parents provided almost everything he wanted—even a pony. When the patient was thirteen years old his mother developed an agitated depression. Shortly afterwards he began drinking, gambling, whoring and playing hookey. Father disapproved, but repeatedly forgave the patient and attempted to find him satisfactory jobs. He never held a job long and became known as the black sheep of the family. The patient married at the age of twenty-three, but continued to live in his father's home. Indigestion first appeared when his wife threatened to leave him. She divorced him after two years, and he soon remarried. His second wife had to go to work in order to support them. She finally became disgusted with his delinquent behavior, and threatened divorce. Two hours after the patient realized she was serious, his hematemesis occurred.

He also illustrated the type who openly acted out his strong dependent desires and who developed an active ulcer when he was threatened with the withdrawal of external support. The point of fixation of this patient's symptoms may be related to the period of oral over-indulgence in infancy.

CASE 6.—(T. H.) The patient was a 44-year-old chronic alcoholic admitted to the hospital with a perforated duodenal ulcer. During childhood he felt unwanted, insecure and unloved. When he was five years old he was placed in an orphanage and later was shifted around from one relative to another. Upper gastro-intestinal symptoms first appeared when the draft threatened him in the first world war. As a young man he was ambitious and fairly successful for a short period, but gradually he became an economic failure and a chronic alcoholic. Three marriages were all unhappy. Transient epigastric pain was associated with the death of his mother, the birth of his children, and financial difficulties. When drunk he repeatedly tried to harm his young baby. A week before admission to the hospital he was arrested for beating his wife, and when ordered by the judge to separate from her, his ulcer symptoms flared up and led to perforation a week later.

This patient again illustrated how a man openly indulged his excessively strong dependent desires. The intensity of the desires appeared to be related to deprivation in childhood. Ulcer symptoms developed whenever he was separated or threatened with loss of support from a mother or mother substitute.

DISCUSSION

In all men with peptic ulcer whom we studied we found intense parasitic dependent desires. In each patient the origin of such strong dependent wishes was traced either to rejection in childhood or to spoiling during the same period. Their ulcer symptoms developed when these infantile cravings were denied. Multiple correlations were noted between the frustration of such desires and ulcer manifestations.

On the basis of external personality characteristics our patients were divided into three groups. Only the first group fit the "classical" ulcer personality type, reacting to deep unconscious dependent cravings by becoming ambitious and successful. It was characteristic of these patients that they utilized the mechanism of overcompensation in their actual life relations. Their behavior became the exact opposite of the infantile oral attitude; instead of taking, they gave; instead of leaning on others, they assumed responsibilities. In this connection it is of interest that the economic status of each patient in this group was such that they were admitted to our hospital only on the basis of a medical or surgical emergency. This is a point worthwhile stressing, for if they had not been emergencies we would not have seen them at all, and our cases would have all fallen into the overtly dependent types.

A second group of patients reacted to similar dependent desires by giving in to them partially. As a result they appeared passive and shy with marked trends of feminine identification in their overt personalities. These men had a close dependent relationship with mother figures. Evidence, which was not presented in the paper, indicated that they faced serious problems in resolving their relationships with brothers and fathers. In contra-distinction to Group I, these men were able to accept some dependency without violent denial; and in contra-distinction to Group III, they made a more adequate life adjustment.

The largest group of our patients, again with deep dependent desires, in addition to utilizing socially acceptable attempts at gratification like the second group, also utilized socially unacceptable means of being dependent such as chronic alcoholism and delinquency. They had little or no guilt or socially acceptable defenses against selfish

demanding impulses, and were openly parasitic on their parents, wives or society, and took and grabbed continually and openly. Essentially, this is the unweaned suckling type of personality whose oral needs appear to be insatiable.

Thus, of the 20 men patients, only 6 fit the traditional personality picture. The remaining 14 were either meek and effeminate or were openly dependent and delinquent. Similarly, this has been noted by Berk and Frediani in a study of 340 patients in an army general hospital(7). They pointed out that a majority of their patients were placid, unobtrusive or slovenly.

Summary

Twenty men with peptic ulcers were studied from the psychosomatic point of view. None were psychologically mature. All of them had strong dependent desires which were secondary to either rejection or spoiling in early childhood. One group utilized the mechanism of overcompensation to deny these desires, resulting in the overt character picture of the driving, hard-working, ambitious business man. However, we found that the majority of our patients in a charity hospital were either outwardly passive and effeminate or openly acted out their deep oral desires. Ulcer symptoms developed in all of our patients as responses to frustration of these cravings, when the various defense mechanisms they used to handle such conflicts proved inadequate.

Conclusion

Our study of men with peptic ulcers has confirmed Alexander's hypothesis that the fundamental psychological factor in this disease is a conflict over intense dependent desires. Such a conflict may arise from opposition within the personality or from the environment. Although the conflict situation is similar in all men with peptic ulcer, the resulting personality façade may vary from exaggerated independence to parasitic dependence.

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THE PSYCHIATRIC RESOURCES OF NEW YORK

S. BERNARD WORTIS, M.D., AND MORRIS HERMAN, M.D.
New York City

At the time of the last New York City meeting of The American Psychiatric Association, Dr. Samuel W. Hamilton recorded in the March 1934 issue of the AMERICAN JOURNAL OF PSYCHIATRY, a short history of psychiatric facilities in New York City. In that article he described the outstanding features of the different psychiatric services available. It would be apropos at this time to bring this material up to date and we felt that it would be best to group the facilities under their different functional purposes, thus making information available to those visiting psychiatrists who have specific interests. In our listing we include some of the psychiatric facilities in the nearby states of New Jersey and Connecticut.

For those who are interested in detailed information, this can be obtained by referring to Dr. Hamilton's article in the AMERICAN JOURNAL OF PSYCHIATRY, Volume 13, March 1934, page 1097, from the offices of The American Psychiatric Association, 9 Rockefeller Plaza, New York City, or from the National Committee for Mental Hygiene, Incorporated, 1790 Broadway, New York 19, New York.

A. MEDICAL SCHOOLS

1. Columbia University College of Physicians and Surgeons, 630 West 168th Street, N. Y. City. Chairman of the Department of Psychiatry: Dr. Nolan D. C. Lewis.
2. Cornell University College of Medicine, 69th Street and York Avenue, New York City. Chairman of the Department of Psychiatry: Dr. Oskar Diethelm.
3. Long Island College of Medicine, 350 Henry Street, Brooklyn, New York. Chairman of the Department of Psychiatry: Dr. Howard Potter.
4. The New York Medical College, 5th Avenue and 105th Street, New York City. Chairman of the Department of Psychiatry: Dr. Stephen Jewett.
5. New York University College of Medicine, 477 First Avenue, New York 16, N. Y. Chairman of the Department of Psychiatry: Dr. S. Bernard Wortis.

B. STATE HOSPITALS

1. Brooklyn State Hospital, 681 Clarkson Avenue, Brooklyn, New York.
2. Central Islip State Hospital, Central Islip, New York.
3. Creedmoor State Hospital, Queens Village, New York.
4. Harlem Valley State Hospital, Wingdale, New York.
5. Hudson River State Hospital, Poughkeepsie, New York.
6. Kings Park State Hospital, Kings Park, New York.
7. Matteawan State Hospital, Beacon, New York.
8. Middletown State Homeopathic Hospital, Middletown, New York.
9. Pilgrim State Hospital, West Brentwood, New York.
10. Rockland State Hospital, Orangeburg, New York.

The state hospitals of New York operate under the New York State Department of Mental Hygiene which has a local office at 80 Center Street, New York City.

INSTITUTIONS FOR MENTAL DEFECTIVES

1. Letchworth Village, Thiells, New York.
2. Rome State School, Rome, New York.
3. Syracuse State School, Syracuse, New York.
4. Wassaic State School, Wassaic, New York.
5. Institution for Female Defective Delinquents, Nappanoch, New York.
6. Institution for Male Defective Delinquents, Albion, New York.

C. PSYCHIATRIC SERVICES IN GENERAL HOSPITALS

1. Bellevue Psychiatric Hospital, 400 East 30th Street, New York City. Director: Dr. S. Bernard Wortis.

2. Columbia Medical Center
   a. The New York State Psychiatric Institute, 722 West 168th Street, New York City. Director: Dr. Nolan D. C. Lewis.
   b. Vanderbilt Clinic, 168th Street and Broadway, New York City. Director: Dr. Robert Cadmus.
3. Kings County Hospital, Psychiatric Division, Albany Avenue and Winthrop Street, Brooklyn, New York. Director: Dr. Sam Parker.
4. Mt. Sinai Hospital, 5th Avenue and 100th Street, New York City. Director: Dr. M. Ralph Kaufman.
5. New York Hospital, Payne Whitney Clinic, 525 East 68th Street, New York City. Director: Dr. Oskar Diethelm.
6. Neurological Institute, Fort Washington Avenue and 168th Street, New York City. Director: Dr. Tracey Putnam.

D. Psychiatric Out-Patient Services

1. Bellevue Hospital, 400 East 30th Street, New York City.
2. Beth Israel Hospital, Stuyvesant East and 17th Street, New York City.
3. Hospital for Joint Disease, 1919 Madison Avenue, New York City.
4. Lenox Hill Hospital, Park Avenue and 76th Street, New York City.
5. Mt. Sinai Hospital, 5th Avenue and 100th Street, New York City.
6. New York Hospital, Payne Whitney Clinic, 525 East 68th Street, New York City.
7. New York Infirmary for Women and Children, 321 East 15th Street, New York City.
8. New York Medical College, 5th Avenue and 105th Street, New York City.
9. New York Polyclinic Hospital, 345 West 50th Street, New York City.
10. New York University, Medical College Psychotherapy Clinic, 463 First Avenue, New York City.
11. St. Lukes Hospital, Amsterdam Avenue and 113th Street, New York City.
12. St. Vincents Hospital, 7th Avenue and 11th Street, New York City.
13. Sydenham Hospital, 343 West 123rd Street, New York City.

BRONX

14. Fordham Hospital, Southern Boulevard, Bronx, New York.
15. Lebanon Hospital, Westchester and Caldwell Avenues, Bronx, New York.
16. Morrisania Hospital, Walton Avenue and 167th Street, Bronx, New York.

BROOKLYN

17. Brooklyn Hospital, 164 Ashland Place, Brooklyn, New York.
18. Hospital of the Holy Family, 155 Dean Street, Brooklyn, New York.
19. Israel Zion Hospital, 4802 10th Avenue, Brooklyn, New York.
20. Jewish Hospital of Brooklyn, 555 Prospect Place, Brooklyn, New York.
21. Kings County Hospital, 451 Clarkson Avenue, Brooklyn, New York.
22. Long Island College Hospital, 88 Amity Street, Brooklyn, New York.
23. St. Mary's Hospital, 1298 St. Marks Avenue, Brooklyn, New York.

QUEENS

24. Jamaica Hospital, 89th Avenue and Van Wyck, Jamaica, New York.
25. Queens General Hospital, 164th Street and Grand Central Parkway, Jamaica, New York.

STATEN ISLAND

26. St. Vincent's Hospital, 335 Bard Avenue, West, New Brighton, Staten Island, New York.
27. Staten Island Hospital, Castleton Avenue, Tompkinsville, Staten Island, New York.

E. Psychiatric Clinics Associated with Courts

1. Bellevue Hospital, Prison Ward Sections, 400 East 30th Street, New York City.
2. Children's Court, Court of Domestic Relations, 137 East 22nd Street, New York City.
3. Court of Domestic Relations, 1118 Grand Concourse, Bronx, New York.
4. Court of Domestic Relations, 111 Schermerhorn Street, Brooklyn, New York.
5. Court of General Sessions, Psychiatric Clinic, 100 Center Street, New York City.
6. Kings County Hospital, Prison Ward

Sections, Albany Avenue and Winthrop Street, Brooklyn, New York.
7. Magistrates' Court, Family Court, Home Term, 300 Mulberry Street, New York City.

F. Psychiatric Clinics Associated with Schools and Agencies
1. Brooklyn Neuropsychiatric Clinic, Fort Greene Health Center, 295 Flatbush Extension, Brooklyn, New York.
2. Bureau of Child Guidance, 228 East 57th Street, New York City.
3. Catholic Charities Guidance Institute, 133 East 58th Street, New York City.
4. Child Study Association of America, Consultation Service, 221 West 57th Street, New York City.
5. Community Service Society, Psychiatric Consultation Service, 105 East 22nd Street, New York City.
6. Girls' Service League of America, 138 East 19th Street, New York City.
7. Jewish Board of Guardians, 339 East 149th Street, Bronx, New York.
8. Jewish Board of Guardians, 228 East 19th Street, New York City.
9. Jewish Child Care Association, Child Guidance Department, 1646 York Avenue, New York City.
10. Salvation Army Psychiatric Clinic, 135 West 14th Street, New York City.

G. Federal Agencies
1. United States Marine Hospital, United States Public Health Service, Ellis Island, New York City.
2. United States Marine Hospital, Neuropsychiatric Clinic, 67 Hudson Street, New York City.
3. United States Marine Hospital, United States Public Health Service, Staten Island, Stapleton, New York.
4. Veterans Hospital, Northport, New York.
5. Veterans Hospital, Lyons, New Jersey.

H. Veteran Administration Mental Hygiene Clinics in the Metropolitan Area

MANHATTAN

New York Regional Office, Mental Hygiene Clinic, 252 Seventh Avenue, New York City.

Veteran Administration Contract Mental Hygiene Clinics at
Mount Sinai Hospital
St. Lukes Hospital
Lenox Hill Hospital

Veterans Information Center, 500 Park Avenue, New York.

BRONX

Lafargue Clinic

BROOKLYN

Clarkson Avenue Mental Hygiene Clinic
Brooklyn Jewish Hospital

I. Psychiatric Analytic Institutes and Facilities
1. New York Psychoanalytic Institute, 245 East 82nd Street, New York City.
2. Institute for Psychoanalysis and Psychosomatic Medicine, 722 West 168th Street, New York City.
3. Washington and Baltimore Institute for Psychoanalysis, Child Study Association Office, 221 West 57th Street, New York City.
4. School for Psychoanalysis, New York Medical College, 5th Avenue and 105th Street, New York City.
5. American Institute of Psychoanalysis, 266 West End Avenue, New York City.

J. Private Institutions

NEW YORK

1. Louden Knickerbocker, Amityville, New York.
2. River Crest Sanitarium, Ditmas Boulevard and Kindred Street, Astoria, New York.
3. The Brunswick Home, Amityville, New York.
4. The Long Island Home, Amityville, New York.
5. West Hill, 252nd Street and Fieldston Road, New York, New York.

WESTCHESTER COUNTY

1. Crichton House, Harmon-on-Hudson, New York.
2. St. Vincents Retreat, Harrison, New York.
3. Croton Manor, Croton-on-Hudson, New York.
4. Four Winds, Katonah, New York.
5. Greenmont-on-the-Hudson, Ossining, New York.

6. Pinewood, Katonah, New York.
7. Stoney Lodge, Ossining-on-the-Hudson, New York.
8. Halcyon Rest, 754 Boston Road, Rye, New York.
9. New York Hospital, Westchester Division, White Plains, New York.

ADJACENT COUNTIES

1. Oceanside Gardens Sanitarium, Inc., Oceanside, Long Island, New York.
2. Craig House, Beacon, New York.
3. Interpines, Goshen, New York.
4. Hillside Hospital, Bellerose, Long Island, New York.
5. White Oak Park, Pawling, New York.
6. The Sahler Sanitarium, Kingston, New York.
7. Beacon Hill, Beacon, New York.
8. Falkirk in the Ramapos, Central Valley, Orange County, New York.

CONNECTICUT

1. Westport Sanitarium, Westport, Connecticut.
2. Woodscourt, South Norwalk, Connecticut.
3. Institute of Living, 200 Retreat Avenue, Hartford, Connecticut.
4. Hall Brooke Sanitarium, Greens Farms, Connecticut.
5. Stamford Hall, Stamford, Connecticut.
6. Silver Hill, New Canaan, Connecticut.
7. Blythewood, Greenwich, Connecticut.

NEW JERSEY

1. Belle Mead Sanitarium, Belle Mead, New Jersey.

COMMENT

A WORD FROM THE PRESIDENT

The time of our meeting is almost here. The program is rich in subjects of scientific importance and social concern. You will give more time than usual to reviewing some functions of the Association. The many attractions of New York might lure you from some sessions, but we expect the largest registration yet and a goodly attendance at every section, quite without any urging by your officers.

Election will proceed in leisurely fashion, the polls being open from 9 a. m. to 4 p. m. Round table discussions will be held both Tuesday and Thursday evenings. The banquet will be on Wednesday as usual. Sessions will continue through Friday afternoon. Special attention will be given to the wishes of the wives and daughters of our membership.

Mr. Davies says it is well to reserve your hotel rooms at once. That done, you may expect a convention both stimulating and inspiriting.

SAMUEL W. HAMILTON

NEWS AND NOTES

PSYCHIATRIC POSTS AVAILABLE IN GEORGIA.—The Emory University School of Medicine, in collaboration with the Grady Memorial Hospital, Atlanta, is offering two fellowships in psychiatry available to those who have had two or three years' work in psychiatry and some experience in teaching. The Lawson Veterans Hospital has one vacancy on its psychiatry residents program. For further information apply to Dr. Carl A. Whitaker, Associate Professor, Psychiatry Department, School of Medicine, Emory University, Atlanta 3, Georgia.

OPENINGS IN PSYCHIATRY AND PSYCHOLOGY, NEW YORK STATE DEPARTMENT OF MENTAL HYGIENE.—Two grades of research psychiatrists (senior and assistant) are sought for special projects of laboratory and clinical character. Salary range in the senior grade is $4560 to $5700; in the assistant grade it is $3681 to $4560. Senior psychologists (at $3681 to $4560) and junior psychologists (at $2268 to $2806) are also required. Applicants must be residents of New York State. Further information may be obtained from the State Department of Civil Service, Albany, N. Y.

CONFERENCE OF WESTERN STATE PSYCHIATRIC INSTITUTE AND CLINIC.—The Institute announces its second annual co-ordinating conference to be held in Pittsburgh, Pennsylvania, April 10 and 11. The theme for this year will be "The Place of Psychiatry in General Medicine." Prominent administrators and teachers in the fields of medicine, psychiatry, psychology, nursing and social work will participate in the program.

CONSULTING PSYCHIATRIST.—The Wichita Guidance Center has an opening for a half-time consulting psychiatrist who may devote his other half-time to private practice. Applicants should apply to Dr. Jerry W. Carter, Jr., Director, Wichita Guidance Center, 3422 East Douglas Avenue, Wichita 8, Kansas.

INTERNATIONAL CONGRESS OF GENETICS.—The eighth International Congress of Genetics will be held in Stockholm, Sweden, during the summer of 1948.

Gunnar Dahlberg, University of Uppsala is chairman and Gert Bonnier, Institutet für Husdjursförädling, Cvind Eldfomta, is general secretary of the organization committee.

REHABILITATION CONFERENCE.—The annual meetings of the National Council on Rehabilitation and the National Rehabilitation Association will be held on April 29 and 30 and on May 1, 2, and 3, respectively, at the Jefferson Hotel in St. Louis. Subjects to be considered include the evaluation of physical and mental disabilities, counseling, testing, selective placement, and other facilities for rehabilitation. Speakers have been invited from official and private agencies and will include specialties in the fields of medicine, surgery, and psychiatry.

NEUROPSYCHIATRIC CONSULTANTS, OFFICE OF THE SURGEON GENERAL.—Leading psychiatrists of the nation who are consultants to the Secretary of War met in Washington, D. C., January 20 and 21, at the call of Major General Norman T. Kirk, the Surgeon General, and discussed future War Department neuropsychiatric policies. Panel discussions included a review of current neuropsychiatric practices and techniques and a consideration of long-range plans. In a press conference, Dr. William C. Menninger, who had presided at the meeting, stressed the importance of good leadership, proper motivation, and identification of the individual with his unit for the maintenance of good mental health of the soldier. He also emphasized the necessity of early recognition of the factors and symptoms leading to the soldier's neuropsychiatric breakdown which would prevent the potential mental casualty.

RESIDENCY IN NEUROPSYCHIATRY.—The Southwestern Medical Foundation in coop-

eration with the Veterans Administration is offering a three-year residency in neuropsychiatry. Two years of this are divided between the Dallas area and the VA Hospital at McKinney and Waco, Texas. The third year is elective, and investigative work is included. Approximately one-half of the required time covers in-patient psychiatry. The other half is psychosomatic medicine and mental hygiene work, including child guidance. For further information write to Dr. Don P. Morris, secretary of the Dean's Subcommittee for Neuropsychiatry, Southwestern Medical College, 2211 Oak Lawn Avenue, Dallas 4, Texas.

ANNUAL MEETING, NATIONAL COMMITTEE FOR MENTAL HYGIENE.—About 1,500 persons representing medical, military, legislative, and educational fields attended the 37th annual meeting of the National Committee for Mental Hygiene held in New York on October 30 and 31, 1946. Sessions were devoted to the following subjects: Strengthening the Hand of Medicine, Experimental Attacks on Fascism, Mental Hospitals and Advancing Psychiatry, and The Mental Health of State and Nation. At the annual luncheon, Dr. Harry D. Gideonse, president of Brooklyn College, spoke on "The Golden Opportunity for Public Education." The Lasker Award * was presented at this time, and Dr. George S. Stevenson, medical director, presented his report. Dr. Frank Fremont-Smith addressed the special annual dinner meeting which was held jointly with the Family Service Association of America, taking for his subject "The Family in the Struggle against Hostility and Aggression."

The keynote of the two-day annual meeting was that the general public is responsible for many of the inadequacies in mental hospitals and clinics; and the National Mental Health Act was hailed as the greatest single step ever taken in the field of mental hygiene.

ARMY MEDICAL LIBRARY MICROFILM SERVICE.—During the war, the Army Medical Library through its photoduplication services supplied millions of pages of microfilmed medical articles to the armed services and other research agencies. The principle of immediate aid direct to the user, wherever he might be, introduced a new technique to assist research. This service is now generally available to civilian physicians, institutions, and research workers on a cost basis. This means direct access to the library's enormous resources of medical literature.

A fee of 50 cents is charged for filming any periodical article in a single volume, regardless of length. Microfilming from monographs is furnished at 50 cents for 50 pages or fraction thereof. Photostats are also available at a charge of 50 cents per 10 pages or fraction thereof. Material filmed is not for reproduction without permission of the copyright owner.

For convenience, and to keep bookkeeping costs down, a coupon system has been established. Users may buy any quantity of photoduplication coupons at 50 cents each. Order blanks are available on request. Checks should be made payable to the Treasurer of the United States and sent to the Army Medical Library, 7th St. and Independence Ave., S.W., Washington 25, D. C.

GRANTS UNDER NATIONAL MENTAL HEALTH ACT.—In accordance with recommendations made recently by The National Advisory Mental Health Council, the U. S. Public Health Service announces that grants may soon be available under the National Mental Health Act providing funds for training, for research, and for community services.

The Service is now authorized to make grants to institutions offering training in psychiatry, clinical psychology, psychiatric social work, and psychiatric nursing, for the purpose of improvement, expansion, and inauguration of training programs in these fields. Application forms and complete information may be obtained from the Training and Standards Section, Mental Hygiene Division, U. S. Public Health Service, Washington 25, D. C. The National Advisory Mental Health Council expects to take final action on these applications by the middle of April, and interested schools are urged to make their applications.

The Council has authorized the U.S.P.H.S.

* See the News and Notes section of The AMERICAN JOURNAL OF PSYCHIATRY, November, 1946.

to grant a total of not more than 600 stipends this year to graduate students of psychiatry, clinical psychology, psychiatric social work, and psychiatric nursing. The Council has suggested that the stipends be equally divided among these four fields. The annual stipends range in size from $1,000 through $2,400 for clinical psychologists, psychiatric social workers, and psychiatric nurses, and up to $3,600 for psychiatrists, depending upon the level of training for which the applicant is eligible. These awards will be made through the collaborating institutions, the names of which will be announced about May 1st. Interested applicants are requested not to write to training centers or the U.S.P.H.S. about these stipends until the May announcement is made.

Grants for research relevant to the problems of mental health may be made upon the recommendation of the National Advisory Mental Health Council to public and private institutions and to individuals. Application forms are obtainable now from the Research Grants Division, National Institute of Health, U.S.P.H.S., Bethesda 14, Maryland.

To assist in development of adequate community mental health programs, grants-in-aid will be made to states on a matching basis. These funds are handled by the mental health authority of each state. Professional and lay people interested in specific service projects should bring their ideas to the attention of their State Mental Health Authority.

Funds to inaugurate actual operation of the programs depend on Congressional appropriations. The earliest date such funds may be available is July 1, 1947.

PSYCHIATRIST, VETERANS ADMINISTRATION.—The Veterans Administration Regional Office, Medical Division, Huntington, West Virginia, announces a vacancy for a psychiatrist. Applicants must be American citizens and hold a degree of Doctor of Medicine from an approved college or university; they must have completed an approved internship, must be licensed to practice medicine and surgery in one of the states or territories of the United States or in the District of Columbia, and must have a specialty in neuropsychiatry, with at least five years' experience (including internship) in civil or military practice. Salaries range from $7,380 to $11,000, depending on the grade. Inquiries should be addressed to the placement officer of the personnel division, J. A. Sneed.

SOCIATRY.—A new journal, Sociatry, Journal of Group and Inter-Group Therapy, has been founded. It is edited by Dr. J. L. Moreno and is particularly dedicated to the development of methods in group psychotherapy and action therapy, such as psychodrama, sociodrama, role training, etc. The first issue has been released. Annual subscription is $5.00; single copy $1.50. Address: Beacon, N. Y., P. O. Box 311.

ARMY MEDICAL FILMS.—Members of the American Psychiatric Association who wish to obtain "Let There Be Light" or other army films on medical subjects should apply to the Chief, Education and Training Service, Office of the Surgeon General, The Pentagon, Washington 25, D. C., instead of to the Committee on Public Education.

EUROPEAN MANUSCRIPTS ON MEDICAL AND RELATED RESEARCH.—Dr. Hans Lowenbach, associate professor of neuropsychiatry at Duke University Hospital and School of Medicine, during a six months' assignment in occupied Germany collected more than 25,000 pages of original manuscipts in all fields of medicine, both research and clinical. Most of the papers concern research hitherto held secret under German wartime restriction. Subjects are largely confined to general pathology, neuropsychiatry, and high altitude studies. This material has been microfilmed and is now on its way to this country to be catalogued and abstracted. It will be immediately available to the public through the office of the Publications Boards, Department of Commerce, 16th and K Street, Washington 25, D. C.

APPOINTMENT OF HESTER B. CRUTCHER TO U.S.P.H.S.—Dr Frederick MacCurdy, Commissioner of Mental Hygiene of the State of New York, has announced the appointment of Hester B. Crutcher, direc-

tor of psychiatric social work of the New York State Department of Mental Hygiene, to the Advisory Council of Psychiatric Social Work of the United States Public Health Service. Five members will comprise the Council, which is to advise the U.S.P.H.S. on such problems as personnel, standards, and methods of carrying out the provisions of the National Mental Health Act. Grants of financial aid for specialized training of psychiatric social workers will be under consideration.

TESTIMONIAL DINNER FOR DOM. THOMAS VERNER MOORE.—The associates, students, and friends of Dom. Thomas Verner Moore, O.S.B., attended a testimonial banquet on January 13, 1947, in Washington, D. C., on the occasion of Dom. Moore's leaving the United States. A fund has been established in his honor to support the continuation and development of St. Gertrude's School of Arts and Crafts, which he founded and for many years directed.

PI LAMBDA THETA AWARDS.—This national association for women in education announces for 1947 two awards of $400 each for significant research studies on the professional problems of women. An unpublished study may be submitted on any aspect of the professional problems and contributions of women, in either education or some other field. Among others, studies of women's status, professional training, responsibilities, and contributions to education and to society, both in this country and abroad, will be acceptable. The two awards for last year were granted to Helga Stene, Oslo, Norway, for "Glimpses of Women's Political Activities in an Occupied Country" and to Alice I. Bryan, Columbia University, and Edwin G. Boring, Harvard University (joint authors), for "Women in American Psychology: Factors Affecting Their Professional Careers." All inquiries should be addressed to Bess Goodykoontz, chairman of the Committee on Studies and Awards, in care of the U. S. Office of Education, Washington, D. C.

RORSCHACH COURSES AT MICHAEL REESE HOSPITAL.—The Rorschach test seminar for 1947 at Michael Reese Hospital, Chicago, will be conducted June 2 to 6, inclusive. Two groups will be studied: (a) children presenting personality problems; (b) adults with severe disturbances, including schizoid reaction patterns. Dr. S. J. Beck will demonstrate the test records and analyze them for the personality structures projected. The course is open to persons with qualified background. For information write to Psychology Laboratory, Division of Neuropsychiatry, Michael Reese Hospital, 29th and Ellis Ave., Chicago 16.

REPORT OF THE NOMINATING COMMITTEE

For President-elect the committee proposes three men, all of whom deserve the honor, and all of whom allow their names to be used only for the good of the Association. They are not candidates in any sense of the word.

Nolan Lewis, New York.
William Menninger, Kansas.
Arthur Noyes, Pennsylvania.

For three Councillors to be elected the Committee proposes the following:

William Malamud, Massachusetts.
M. A. Tarumianz, Delaware.
Donald Hastings, Minnesota.
George Johnson, California.
John Romano, New York.
Robert Felix, District of Columbia
Frank Luton, Tennessee.

For Secretary:

Leo H. Bartemeier, Michigan.

For Treasurer:

Howard W. Potter, New York.

For Auditor the committee proposes

Conrad Sommer, Illinois.

Signed:

EARL D. BOND,
Chairman,
LAURETTA BENDER,
D. C. BURKES,
EWEN CAMERON,
HENRY COLOMB.

BOOK REVIEWS

THE ROLE OF THE AGED IN PRIMITIVE SOCIETY. By *Leo W. Simmons.* (New Haven: Yale University Press, 1945).

In a sense this book is difficult to review. It is so compactly written, so crammed with informative detail, that an over-all perspective can be gained only after several readings. The volume is another in the important series that has resulted from the cross-cultural analyses being carried on at Yale. We are indebted to the members of the staff for making available such broad, carefully documented surveys, of which the present volume is a distinguished example.

Prof. Simmons' methodology is pioneering, insofar as no comparable study has previously been attempted. From his ethnographic and historic data he first observed a sex difference in the treatment of the aged. Subsequent analyses revealed differences associated with geographic factors, climate, degree of permanence of residence, type of economic organization, form of kinship system, and "possibly the degree of religious development." As a result of this analysis 109 physical and cultural characteristics ("traits") of old age were grouped: (1) habitat, maintenance, economy; (2) politico-social organization; (3) religious and miscellaneous beliefs and practices; then, by the use of Yale's coefficient of correlation, correlations between traits and the social status and treatment of the aged. In all, 71 tribes were studied, 16 in North America, 2 in Central America, 8 in South America, 8 in Oceania, 4 in Australia, 14 in Africa, 3 in Europe, and 16 in Asia. As relates to climate, 11 were in *severe* (cold with long winters), 24 in *temperate* (about equal summer and winter), and 36 were in *warm* (little winter and much summer). In these three categories there were 15 who were in *drought* (danger of famine). There is one further important methodological note, viz., that Professor Simmons expressed the presence or absence of traits qualitatively: strongly present (+), moderately present (=), weakly or incipiently present (—), absent (0), and no information available on the trait (□).

The first fact that emerges is that old age, *per se,* is rare in primitive societies. The peak of the death curve is most frequently achieved in the fifth and sixth decades of life (occasionally in the fourth). The author estimates that only 3 percent, or slightly less, ever reach the age of 65 years.

The aged have a greater chance of sharing food in a society where such a trait is already present, irrespective of age. Such a social trait is more common in severe or drought climatic areas, and among collectors and fishers. In other words it appears that food care for the aged is correlated more with the prevailing food (communal) pattern than with age itself. Furthermore, there is an evident negative correlation between community care of the aged and many traits usually associated with more highly developed societies: permanency of residence, constancy of food supply, use of grain for food, private property in land, and so on. With reference to property rights in old age there is a marked sex difference, and extreme variability in extent of ownership reflecting both environmental and cultural factors.

It is almost universal in primitive societies that there is deference for the aged. In a limited number of tribes there are social taboos favorable to the aged. Professor Simmons concludes that "considerable prestige has been accorded to the aged in primitive societies, but only under culturally determined circumstances and for a limited age period which rarely extended into decrepitude. Sexual differences have been significant. . . . . If either sex has lost respect in old age, it has been more likely to be the women than the men." In many primitive societies, dependent upon climate, permanence of residence, basic maintenance pattern, and form of family organization, the aged may achieve a relative security by identifying themselves with "the interests and enterprises of others." They usually do so by becoming useful in the "odd jobs" and lighter tasks of camp life.

In primitive society generally the aged command respect in political, judicial and civil activities, especially if the individual has been vigorously prominent in these fields in the prime of life. The role of "elder statesman" is a common one, more or less formalized in various primitive groups. The degree of such recognition is dependent upon three factors: (1) individual ability and initiative; (2) sex; and (3) a favorable combination of socio-cultural conditions. With greater socio-economic stability and integration the role of the aged improves.

A great hold of the aged upon the group resides in the fact "that they have almost universally been regarded as the custodians of knowledge *par excellence* and the chief instructors of the people." Especially is this true in those groups where the practice and belief in magic is at a maximum, and where the aged have literally become mediators between the group and the world of the supernatural.

Type of family organization seems to be related to the form of socio-economic organization. The mother-family system is found chiefly where there is a simpler form of maintenance, such as collection, hunting and fishing. The father-family system is found chiefly among herders and farmers.

Death in old age, *i.e.,* the attitude of the individual toward his or her own demise, and the attitude of the group toward death of the aged generally, does not present a uniform pattern. Professor Simmons observes: "In death, as in life, man's fate has been decided by the mores of his time and place."

In the review I have sought to summarize some of Professor Simmon's main conclusions. In so doing I have, perforce, abstracted, summarized, and (mayhap) over- or de-emphasized certain points. But I want to register my reaction that here is a good job well done. Sociologists, psychologists, psychiatrists, geriatricians, will gain a masterly appraisal of the ways in which primitive peoples have dealt with their aged. We, with our changing population profile—with more people living into the 60's and 70's than ever before in the history of Man—may well read this volume. We can learn by precept, benefit by experience. Maybe someday we'll know enough so that a future sociologist may write a companion volume: "The Role of the Aged in Civilized Society." If that book is ever written it will but extend the path blazed by Professor Simmons.

W. M. Krogman, Ph. D.,
University of Chicago.

Practical Neurological Diagnosis. 3rd ed. By *R. R. Glen Spurling, M. D.* (Springfield, Ill.: Charles C. Thomas 1944).

The modern neurologist is really the only remaining general practitioner. As the nervous system pervades the entire body the neurologist must know much regarding the examination of the eye, throat, ear, of all the great physiological systems; the effect of gastro-intestinal intoxication and disorder, the genito-urinary apparatus, the inter-relationship of the glands of internal secretion and the effect on the nervous system of poisons from without and from within. He must be aware of the role played by allergy in producing neurological symptoms by affecting almost any part of the nervous system and often mimicking the symptoms of brain tumor or meningitis. He must even have more than a nodding acquaintance with diseases of the skin and at least with the possibilities of orthopedic surgery. When one adds to these necessities a grasp of human personality and the vagaries of the neuroses and the early stages of mental disease one has a field almost as broad as the whole field of medicine, not to be understood by even this excellently succinct and well-written book entitled "Practical Neurological Diagnosis."

The title, in the opinion of this reviewer, is a misnomer and might better be called "An Outline of Neurosurgical Examination." Indeed, every neurological surgeon is advised to learn this book of 230 pages by heart; its text is without untruth and its truth is certainly curtly stated. There is an excellent description of an organic examination. The whole subject of "hysteria" is dismissed in one paragraph on page 119.

The book is written entirely from the point of view of an operating neurosurgeon: 50 pages of this small book being occupied by Roentgen diagnosis.

The reviewer calls to mind cases of profound hysteria, laminectomized by neurosurgeons under the belief that the patients had spinal cord tumors or hematomyelia; of bilateral cervical laminectomy performed on a surgeon whose attacks of so-called "radicular pain" in the shoulders were "manic-depressive equivalents," to be entirely cured later by electric shock treatment; of total section of the trigeminal nerve, re-opened when the facial pain remained unabolished: cured later of pain by the same medium of electric shock treatment, the pain having been a somatic delusion in the course of severe melancholia. These strictures are made because it is clear that to many neurological surgeons, diagnosis seems easy; but it is not easy, and it is misleading to try to contain it in a slim book such as this however clearly and succinctly examinational information be given.

This reviewer has complained of the title "Neurological," feeling that the word "Neurosurgical" should be substituted. One wonders further what the author has in mind by the use of the word "Practical." "Practical" is defined in the dictionary as opposed to "speculative" and "ideal." It is surely as *practically* important to diagnose a paralysis due to conversion hysteria, if it be so, as it is to diagnose it as being due to a spinal cord tumor, if it be not so.

The book is an excellent outline of an organic neurological examination. The X-rays are superb.

Foster Kennedy, M. D.,
Cornell University College of Medicine, New York, N. Y.

Modern Attitudes in Psychiatry. (The March of Medicine, 1945.) Number X of the New York Academy of Medicine *Lectures to the Laity* (New York; Columbia University Press, 1946).

The New York Academy of Medicine rounds out the first decade of its notable series, "*Lectures to the Laity,*" with another outstanding contribution to public education—a symposium on the place of psychiatry in modern medicine. This symposium is particularly timely in view of the many problems of mental health pointed up by the war and by the social and economic forces now shaping the pattern of the future. There is certainly a pronounced need for the crystallization of a collective sense of responsibility in matters of public health and welfare, and psychiatry can well serve as the *exemple par excellence* of opportunity repeatedly missed, yet pregnant with possibilities for the greatest good to the greatest number.

An attempt has been made in these lectures to bring the public abreast of the progress already made in psychiatry, to convey an idea of its vast implications, and to suggest the proper directions for future development. Emphasis is particularly placed on the need of research and the importance of prevention as well as treatment. The topics discussed are well chosen and effectively presented, in line with the usual high standard of the Academy's *Lectures to the Laity.* The history of psychiatry, its gradual liaison with other branches of medicine, the psychosomatic perspective, and lessons of war psychiatry are well and succinctly told. Of exceptional interest is the lecture of Dr. Franz Alexander on present trends in psychiatry and the future out-

look, which provides an excellent account of psychiatry as a scientific discipline and the reconciliation of the biochemical and psychological approaches in research and therapy.

The value of the lecture program would have been enhanced at this time, had it included a recapitulation of the history and present status of mental hospital care in this country. A clearing of atmosphere in this, the most concrete modality of psychiatry, which represents, too, a pointed example of state medicine and lies in the province of public responsibility, would be advantageous to one and all.

C. C. Burlingame, M. D.,
Institute of Living,
Hartford, Conn.

Fundamental Patterns of Maladjustment. The Dynamics of Their Origin. By *Lester Eugene Hewitt and Richard L. Jenkins.* (State of Illinois publication 1945.)

This statistical analysis and psychiatric evaluation by Lt. L. E. Hewitt and Dr. R. L. Jenkins is based on 500 case records of children examined at the Michigan Child Guidance Institute. Only 9.2 per cent of these children were court referrals.

Particular emphasis is given in this study to the reliable correlation of certain behavior syndromes with corresponding situational patterns. "Parental rejection is closely associated with unsocialized aggressive behavior on the part of the child; parental negligence and exposure to delinquency patterns is closely associated with socialized delinquent behavior; and both repressive families and physical deficiency are closely associated with overinhibited behavior." These correlations are described as evident enough to justify the clinician facing a particular type of maladjustment to direct his investigation towards finding a certain situational pattern, and vice versa. Maladjusted behavior can almost be regarded as a "rational" reaction of the child not only because the person in close contact provokes but also exemplifies a certain behavior pattern.

This "rational" behavior arising from certain circumstances and indicative of a fundamental warping of the child's personality in a particular direction requires a different psychotherapeutic approach in each of the three types. For any success with the aggressive type, skillful, authoritative management is advocated.

Frederick H. Allen, M. D.,
Philadelphia Child Guidance Clinic,
Philadelphia, Pa.

The Family from Institution to Companionship. By *Ernest W. Burgess and Harvey J. Locke.* (New York: American Book Company, 1945.)

This book is best characterized as a very high-grade textbook. The authors have arranged the subject-matter under the four major heads of The Family in Social Change, The Family and Personality Development, Family Organization, Family Disorganization and Reorganization. All relevant sciences are drawn upon, and the extensive quotations from human documents, published and unpublished, form an especially attractive feature of the volume. Professors Burgess and Locke themselves call attention to the extensive use made of Max Weber's "ideal type" approach,—certainly an unexcelled pedagogical device. The dangers that lurk in it for the unsophisticated are guarded against in an Appendix and in repeated explanations that reality presents a continuum, not contrasted polar extremes.

The primary thesis of the work, indicated in the title and the Preface, is that the family has been evolving "from an institution to a companionship." It is defended with ample evidence and without undue partisanship; though obviously in favor of the goal towards which they see the family trending, the authors are opposed to viewing it in anything but objective, critical fashion (p.716).

There is to my mind only one major task that they have shirked. They offer full comparative data on the primitive, the Chinese, the Negro, the Russian family; but they constantly write as though the companionship family were an exclusively American product that germinated from our pioneer conditions. A comparison with the norm in educated Scandinavian circles might have proved broadening and illuminating.

Two minor points may be worth noting. The official statistics on Eire divorces (p.628) may have to be revised if the "country divorces" reported from County Clare are at all typical of major areas (Conrad M. Arensberg and Solon T. Kimball, Family and Community in Ireland, Cambridge, 1940, p. 137). And it is hardly correct to say (p.13) that in the maternal family "sons continue to live with their mother," merely visiting the homes of their wives. As the quotation about the Hopi shows—and the same holds for the Canella of Brazil—the husband after a fashion resides in both his mother's and his wife's homes.

Every chapter closes with a section labeled "Summary and Research," in which attention is directed to problems that await further inquiry,—a valuable feature in a valuable treatise.

Robert H. Lowie, Ph. D.,
University of California.

1. Correctional and Rehabilitation Work, Reformatory School, Lucknow; 2. Correctional and Rehabilitation Work, Juvenile Jail, Bareilly; 3. Schemes for Delinquency and Its Correction; Prevention and Correction of Delinquency, Mental Disorder and Mental Deficiency; A Few Suggestions Regarding Adult Crime. By *Lt. Col. A. H. Shaikh,* Inspector General of Prisons, United Provinces, India. (India: United Provinces Printing and Stationery Office, 1945.)

In these three booklets, the author outlines his theories of criminology and penology and presents reports on the two institutions in India where they are put into practice, viz.: the Juvenile Jail, Bareilly

and the Reformatory School, Lucknow. The credit for inspiring this program is attributed to the late Dr. William A. White of St. Elizabeths Hospital, Washington, although to the reviewer the set-up bears more than a passing resemblance to the English Borstal System. An attempt has been made to establish a psychiatric approach to delinquency.

The Bareilly institution with accommodation for 188 boys admits "casual juveniles from other jails" serving sentences of from one year to life for crimes running from dacoity to murder. The Lucknow Reformatory School accommodates 91 male juveniles up to the age of 18 who have been guilty of theft, have had previous convictions and are serving sentences of from 3 to 7 years. "Affectionate and considerate treatment is given to the boys as much as is expected in a well-adjusted home." No corporal punishment is administered. An attempt is made to get the boys interested in games and scouting. They are kept employed from 5 a.m. to 8.30 p.m. including two hours schooling daily, on the theory that keeping the mind occupied "gives no time for idling or idle talk." Carefully selected inmates work on an apprenticeship basis and for small wages in near-by industrial plants. Each inmate on admission is given a choice of a 2 years training in any of the following occupations: tailoring, carpentry, masonry, agriculture, poultry-keeping, weaving, printing, bee keeping, leather work, lacquer work, bagpipe band, sericulture (silkworm-breeding).

"Religious teachers are not allowed to show the superiority of one religion over the other. They are asked to talk on the good points common to all the religions." What a religious Utopia! Eighty-five percent of the admissions are illiterate and thirty percent were homosexuals on admission, now reduced to seven percent by psychotherapeutic training.

What are the results of this experiment to date? Of 304 boys released *272* or 89% are "fixed in life and are leading the life of law-abiding citizens." It is to be noted, however, that though each boy was taught a trade, the vast majority go back to the land if they came from the land.

The author expresses himself as definitely in favour of the indeterminate sentence, of supervision of institutions by "doctors of behaviour—psychiatrists, psychologists and sociologists" and of probation for first short-term offenders. In the opinion of this reviewer, the author has indicated the crux of the delinquency problem when he states: "There is desire to get money to satisfy deprivations and yet there is no desire to work for it in a socialized way."

C. M. Crawford, M. D.,
Psychiatrist, Kingston Penitentiary, Ontario.

Psychosomatic Diagnosis. By *Flanders Dunbar, M. D., Med. Sc. D., Ph. D.* (New York: Paul B. Hoeber, Inc., 1945.)

A book like this, which attempts to link up psychological or characterologic factors with bodily disease, suffers at the outset from severe handicaps. In the first place, there are no pure characterologic types. Thus a man may be dominant in certain relationships and quite passive in others. One is surprised frequently that the most humble man he meets in his office is a tyrant in his own home. Secondly, the truth is rarely told in interviews, even though those interviews be conducted with the extraordinary skill which is complacently claimed in this book. Thirdly, the history of medicine is replete with instances which are thought to be of emotional origin and which final and authoritative research established on a definite organic basis. For example, in my medical school days, paralysis agitans was considered amongst the functional diseases. One could find plenty of emotional disturbance to account for the Parkinson's disease. It was only much later that encephalitis and lesions in the basal ganglia became the starting point of etiology and pathology in this disease. In a certain sense all psychological interpretation of human beings is beset by the difficulty that man who is of woman born is born to trouble as the sparks fly upward, and to say that one kind of frustration and emotional difficulty is statistically somewhat more valid in a small group and is of etiologic importance is to go against all scientific logic, and whatever its pretentious covering of statistical analysis may be is in reality naive.

That emotional disorder may create physical disturbance and disease is as old as the first medical observers and antedates them. All one has to do is to read the old literature and find that frustration in love caused brain fever, tuberculosis, sudden death, lingering invalidism, etc. All medical men except the psychoanalysts believed that body and mind were one and that emotion was an organic event before psychosomatics came on the scene. Physiologists pointed out the correlation between emotion and internal gland secretion, and clinicians knew of the relationship between emotion, gastro-intestinal disorder and ulcer before the psychiatrist came pell-mell into the situation and to confuse the issues. Long ago Adolf Meyer stated that function could destroy itself and the organ, and a less important person, myself, stressed for many years that there was no boundary between types of experience, whether they were classed as organic or psychological events.

It is a far cry from this, however, to certain statements which are characteristic of this book, and so I will not review the entire book but will cite certain examples which are typical of the whole and which, to my mind, are entirely unproven by the methods of this book, which even the writer seems to know judging by her expostulations at certain points. For example, discussing the personality which predisposes to accident and that which predisposes to coronary disease, the author makes the following statement,

"On the basis of our material then, it appeared that at least one factor in the personality which predisposes to accident is this tendency to solve the conflict between repressive authoritarian pressures and individual spontaneity by striving for satisfactions and security outside of the authori-

tarian hierarchy. By focusing their values on immediate concrete experience and by avoiding any marked submission or domination in vocational and social roles, they usually managed to minimize or avoid serious conflicts with authority. When thwarted, deprived, or subjected to some strain such as unemployment or a mother-in-law living in the family, patients who developed 'accident proneness' had the tendency to *do something* either to modify the situation or to get away from it instead of just keeping their anger bottled up and boiling inside. As children, if they had been angry with their parents or felt neglected, they had run away from home or arranged an elaborate revenge, or they had found some way to get at all costs (including lying and stealing and later occasionally even killing) the thing of which they had been deprived, or at least a substitute for it. They had the habit of escaping from emotional conflict into action. Patients with coronary disease, on the other hand, under similar circumstances would sulk or become ultra gentle and considerate, turning to philosophy or trying to repay injury with kindness, and develop sensitive consciences.

"In this tendency of fracture patients lies the basis for the further observation that these patients are relatively inarticulate, characterized by action rather than thought and brooding, which probably has a bearing on the fact that there seem to be few full-fledged psychoneurotics among them, and many eccentric characters." (p. 56)

Discussing tension, the author states,

"All patients are not tense in the same way. Some patients who are tense show this in an appearance of stiffness, jerky movements, or a high strident voice; whereas others give no obvious evidence of tension so that one is surprised to discover in the course of physical examination how tense they really are. The former are usually called jumpy, nervous, hysterical, while the latter often escape notice entirely from this point of view. Among the former are those who tend to act out their conflicts in one way or another, and get considerable satisfaction from the attention paid to their symptoms. Sometimes they actually get themselves injured and sometimes they merely get sympathy for being such highly strung individuals. In general patients with certain symptom neuroses, allergies, and those who tend to have accidents, belong to this group. In some disorders localized spasms are prominent.

"Patients with hypertension, gastro-intestinal disease, or some other smooth muscle spasm, on the other hand, are likely to have a generalized tension which often escapes notice because of their appearance of quiet control. Patients in this group, furthermore, tend to give great attention to correct external behavior, and unless there is a marked accompanying symptom neurosis they usually dislike too much attention to their symptoms, and tend to go on in spite of them. They are likely to deny that they are nervous. This seems to be in part because these patients are universally afraid of their aggressive impulses. As already noted they are outstanding for the degree of their repressed or pent-up hostility. Hence they are usually considerate of others and are loathe to arouse criticism of any kind so that they try to conceal their tenseness itself. The question arises as to whether the necessity of subjecting to special control the manifestations even of their tension, which itself is serving the purpose of keeping aggressive thoughts and actions in repression, may not have something to do with the development of smooth muscle spasm. The tension seems to be driven inward to involve also the vascular or gastro-intestinal systems." (p. 54)

There are obvious difficulties in the way of these conclusions. In the first place, no real control studies have been done, and Dr. Dunbar seems to know this by making the following statement,

"The *stickler* (italics mine) for a full measure of scientific control may raise the question: 'Granted that the various groups reacted differently to emotional stimuli, how can we know that emotion was really a causative factor when not everyone who goes through emotional stress and strain does develop illness?' Yet the same objections could be made to the germ theory of infectious disease, on the ground that not everyone exposed to scarlet fever develops it. Study of a normal control group may be necessary to develop the mechanisms of immunity, but not always to establish an etiology for those who become sick" (p. 166).

This is as disingenuous a statement as one could possibly imagine. The establishment of the germ theory of disease is based on the four laws of Koch, by which the germ had to be recovered from the body, bred in pure culture, injectable into animals and give the same symptoms and pathological processes as were found in the original lesion. There was a precision about proof which cannot be compared for accuracy and validity with the proof of this book, and I cannot understand how the author compares the two types of proof. The fact that no such proof could be available in psychosomatics does not take away from the fact that the comparison is entirely uncalled for. Furthermore, the term "stickler" in reference to the persons who want full scientific control is obviously motivated. I will stick my head out and become a stickler for scientific control.

Thus the statistics in regard to accident overlook the great statistical facts about accidents. In the first place, accidents tend to occur amongst men more than women because the former are exposed to more dangerous occupations. Secondly, accidents occur amongst longshoremen, miners, steelworkers much more than they do amongst college professors and doctors of divinity as well as psychiatrists. The risk of the occupation certainly plays a role. Furthermore, there are alternative explanations which are not even considered in this book, and which may seem incredibly naive to its author. First, nothing is said of the recklessness of character. There are people who are far more impulsive than others, who do not foresee events, who are more egotistic, who want to get where they are going quicker regardless. Another explanation is also too simple for words. Nothing is said of the

relative skill, coordination and bodily manipulable characteristics of the individual. In the tests for aviators these objective criteria are tested for. In order to make this study of accident at all valid, similar tests should have been invoked and their results coordinated with accident potentiality.

So far as coronary thrombosis is concerned, a recent study by Dr. Samuel A. Levine which appeared in an issue of the J.A.M.A., showed that the rate for coronary thrombosis is about the same in males of diverging occupations, such as doctors, lawyers and the male population as a whole. It is rather incredible that doctors, lawyers and laborers have the same general trends so far as personality goes. Moreover, there is a strong hereditary tendency to coronary thrombosis which cannot be overlooked, and which is perhaps the most important single factor. It may be that this hereditary tendency is really a similar personality-tendency, but this remains to be proven and cannot be assumed.

In one place, to cite the therapeutic importance of an interview, it is stated that the patient with urticaria of emotional origin got well with one interview of a therapeutic type—to the amazement of all concerned. There is no statement made as to the number of urticarias of this type which did not get well with a single interview or many interviews. Nor is there any evidence anywhere that the urticaria may not have disappeared without this interview, since urticarias have a habit of disappearing in a day with or without therapeutics of any kind. Such is the type of proof adduced.

Work in the field of establishing personality relationships with somatic disease is commendable because it definitely bears on the fact that the emotions and the troubles of the human being express themselves in his organic structure just exactly as his joys and his achievements do. But psychosomatics has become exceedingly popular, and as such has become a fertile field for fantastic speculation of all types. It is very possible that what we call psychosomatics is somatopsychicsomatics, by which I mean that the organism or the organ involved is liable to disturbance and that the fault rests not so much in the environment as in the conditioned or inherent structure of the organ. Thus there are people who vomit under any and all circumstances and have done so from the day of their birth. There are others who express emotional disturbance by increased heart rate or by sweating or by feelings of faintness, etc. The human being seems to be a visceral specialist in the way he expresses his disturbance, and some are polymorphous, manifesting such disturbance by the disorganization of almost every function. There are, practically speaking, only one or two valid sets of experiments which indicate that a specific emotion would create bodily damage. There are many which indicate how tremendously the emotions are disturbed by bodily change, a matter which I have called *somatopsychics*.

Moreover, with all this emphasis on psychosomatics the real cures or ameliorations of gastric ulcer, cardiac disease, hypertension and the like still rest on physical therapeutics. True, the patient is instructed to avoid trouble and frustration, which he can rarely do. However, he is still given drugs to quiet him down; and moreover the only valid approach to hypertension is a surgical operation. The treatment of ulcer still remains diet, drugs and operation of one type or another. Coronary thrombosis is not treated psychosomatically beyond the very valid instruction to limit emotional as well as physical strain, and the time seems to be approaching when physical measures, such as the use of hormones, adrenalin inhibition and other direct therapeutic measures are to have their therapeutic day.

It is amusing to note the retreat from psychoanalysis despite the fact that the analysts are increasing in number and personal power. The present moment, with its difficulties, has been emphasized by some of the new schools, a thing which would have been anathema and taboo to Freud, himself, and to most of his followers up to recently. Superficial psychotherapeutics seems to be important and the emphasis on complexes in infancy is gradually but definitely disappearing. The psychoanalysts even use drugs and shock treatment not, of course, for their direct therapeutic effect, but because they make the patient accessible to psychotherapeutics which is rarely psychoanalytic in these days.

All of the above may be irrelevant. I have criticized this book perhaps harshly. The effort certainly is laudable; the language very good; the citation of the literature extensive; and very picturesque phrases occur here and there to enliven the reader's mood. But the dogmatism of the author is not at all justified. The book remains an effort, in my mind an unsuccessful one, to find characterologic traits which explain bodily disease.

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HOW HEREDITY BUILDS OUR LIVES. An Introduction to Human Genetics and Eugenics. By *Robert Cook and Barbara Burks.* (Washington: American Genetic Association, 1946.)

This is broad, sound outline, clearly written by experts, showing what heredity and environment can do, and emphasizing why we must and how we can "look at life eugenically." When we embarked on a Vital Revolution by reducing death rates and controlling reproduction and births, we suspended natural checks and balances, became master of our own fate, and "took over willy-nilly a great experiment in human evolution." It is urgent that we plan to direct it realistically, courageously and humanely. The geneticists' manifesto is quoted with approval: 'Both heredity and environment are dominating and inescapable complementary factors in human well-being, and both are under potential control by man and admit of unlimited but interdependent progress.'

This booklet presents a nice summary of facts not usually brought together.

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THE PSYCHOLOGY OF SEEING. By *Herman F. Brandt, Ph. D.* (New York: Philosophical Library, 1945.)

This book is a compilation of studies done at the Visual Research Laboratories of Drake University, Des Moines, Iowa. The general areas of research are: instrumentation for objective observation, basic eye movements, advertising—evaluated by photography, learning—revealed by ocular performance, art—judged by the response of the observer, ocular patterns and psychological implications. These sections are preceded by an introductory chapter and are followed by a section on projected studies, a brief bibliography and glossary. The general approach is towards the layman on the assumption that he understands little about vision.

Among the new equipment described, there is a portable bidimensional camera which records every eye movement and eye fixation of the subject while reading. The author also reports a series of tests for determining the preferred positions in eye movements. Utilizing the method of ocular photography, several techniques have been elaborated to determine the efficacy of various advertising techniques. The author has investigated the attensity of isolation and concludes that the use of white space for creating the state of isolation in an advertisement has not been fully appreciated and should be more regularly employed. With regard to color, the results show that red had no attentional advantage over black and white, except when utilized in headline form.

The author has been ingenious in applying the method of ocular photography to a variety of advertising problems, such as the determination of what relative amounts of time are devoted by men to the different parts of a woman's body, and, likewise for women, to the different parts of a man's body. The upper half of the man's body is dominant in attention-getting value, especially the face, collar, and tie. For the woman, however, the foci of maximal attention are the hair, eyes, and mouth. This was under the condition of asking the men to judge the age of a woman while the women were asked to simply look at a man. The implications of this difference are obvious, especially in view of the absence of any emphasis on the woman's legs and feet.

Dr. Brandt has devised a series of designs in order to compare horizontal to vertical eye movements and suggests that ocular photography will play an increasingly larger role in evaluating visual learning. On the basis of several experiments the author makes some concrete teaching suggestions for improving instruction in algebra, arithmetic, spelling and geography.

Without entering into the nature-nurture controversy with regard to intelligence, Dr. Brandt contends that much about the intelligence of an individual may be discovered by the study of his ocular performance. It is, of course, well known that perceptual acuity plays a great rôle in general intelligence and one's ability to learn, retain, and reason. What seems more essential to the reviewer, however, is that motivational and emotional factors may influence perceptual acuity.

Toward the latter part of the book, the applications of ocular photography (ophthalmography) to reading diagnosis, remedial therapy for reading difficulties, a study of how children read pictures and copy, and the judgment of art as determined by ocular fixations are considered.

After listing the essential determinants of attention and briefly discussing the problem of individual differences, Dr. Brandt closes the book with a discussion of some of the problems which have yet to be studied through ocular photography. Among these are certain unsolved problems in optometry, illumination, lie detection, the general problem of efficiency, the relative importance of peripheral and foveal vision in relation to specific aptitudes for certain skills, and as an additional evidence of alcoholic intoxication.

Dr. Brandt has succeeded in broadening the range of applicability of the technique of ocular photography from its originally narrowed use as a test in reading diagnosis. While there is less likelihood of any important theoretical findings emerging from the use of these techniques, this book certainly illustrates the importance of evaluating eye movements in a large variety of practical problems and is replete with many experimental suggestions.

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THE INDIVIDUAL IN SIMPLER FORMS. By *Arthur Russell Moore.* University of Oregon Monographs. Studies in Psychology, No. 2. University Press, University of Oregon, 1945.

Although the author is a physiologist, this book is written for psychologists and contains much of general interest. Professor Moore's own researches are here brought together and put in their proper setting, that of a broad consideration of the factors which contribute to the complexity of animal organization. An attempt is made to show that the geometry as well as the physics and chemistry of an organism must be taken into account. By the geometry is meant the spatial arrangement of both the cells and the central nervous system. It is argued that spatial arrangement permits of the development of organs, of the differentiation of tissues and of polarity and head dominance. Finally an attempt is made to deal with memory as a physiological concept.

This monograph presents a personal point of view and makes readily available much of the literature on the nature of individuality.

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